MEETING

STATE OF CALIFORNIA

AIR RESOURCES BOARD

JOE SERNA, JR. BUILDING

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

BYRON SHER AUDITORIUM, SECOND FLOOR

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SACRAMENTO, CALIFORNIA

THURSDAY, MARCH 26, 2009

9:00 A.M.

JAMES F. PETERS, CSR, RPR
CERTIFIED SHORTHAND REPORTER
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APPEARANCES

BOARD MEMBERS

Mrs. Barbara Riordan, Acting Chairperson

Dr. John R. Balmes

Ms. Sandra Berg

Ms. Dorene D'Adamo

Mr. Ronald Loveridge

Dr. Daniel Sperling

Dr. John Telles

Mr. Ken Yeager

STAFF

Mr. James Goldstene, Executive Officer

Mr. Tom Cackette, Chief Deputy Executive Officer

Ms. Ellen Peter, Chief Counsel

Mr. Michael Scheible, Deputy Executive Officer

Ms. Lynn Terry, Deputy Executive Officer

Mr. Michael Ginty, Assistant Division Chief, Goods Movement Programs Section, Planning and Technical Support Division

Mr. Sam Gregor, On-Road Control Regulations Branch, Mobile Source Control Division

Mr. Wes Ingram, Criteria Pollutants Branch and Alternative Fuels Section, Stationary Source Division

APPEARANCES CONTINUED

STAFF

Dr. Lori Miyasato, Heath and Ecosystems Assessment Section, Research Division

Mr. Michael Miguel, Project Support Section, SSD

Mr. Rob Oglesby, Director, Office of Legislative Affairs

Mr. George Poppic, Senior Staff Counsel

Mr. Ravi Ramalingam, Air Quality and Transportation Planning Branch, Planning and Technical Support Division

ALSO PRESENT

Mr. Todd Campbell, Clean Energy

Mr. Eric Cleveland

Mr. Mike Flanigan, Les Schwab Tire Centers

Mr. Tom Fulks, Neste Oil

Mr. Anibal Guerrero, American Political Association

Ms. Jane Hagedorn, Breath California

Ms. Bonnie Holmes-Gen, American Lung Association

Mr. Roland Hwang, NRDC

Mr. Steve Kaffka, University of California Davis

Mr. Tom Koehler, Pacific Ethanol

Ms. Camille Kustin, Environmental Defense Fund

Mr. Edwin Lombard, California Black Chamber of Commerce

Mr. Pete Montgomery, N2 Revolution

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Bill Mueller, Valley Vision

Mr. Michael O'Hare, University of California Berkeley

Ms. Brigette Tollstrup, SMAQMD

Mr. Derek Walker, Environmental Defense Fund

Ms. Pamela Williams, California Retailers Association

Mr. Daniel Zielinski, Rubber Manufacturers Association

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PROCEEDINGS

ACTING CHAIRPERSON RIORDAN: Let me just indicate that I'm hoping to start right on time, because we have a quorum now and we do have some time considerations later this afternoon that I want to be sure that we are able to finish so that everyone can catch their planes that are flying and have to be on a particular plane at a particular time.

Let me just say good morning to all of you and that this is the Air Resources Board meeting for March 26th. We welcome you.

And let me call upon all of us to join in the pledge to our flag. Would you join me, please?

(Thereupon the Pledge of Allegiance was recited in unison.)

ACTING CHAIRPERSON RIORDAN: Madam Clerk, would you please call the role?

BOARD CLERK VEJAR: Dr. Balmes?

BOARD MEMBER BALMES: Here.

BOARD CLERK VEJAR: Ms. Berg?

Ms. D'Adamo?

ACTING CHAIRPERSON RIORDAN: She will be joining us. She is here.

BOARD CLERK VEJAR: Ms. Kennard?

Mayor Loveridge?

Mrs. Riordan?

ACTING CHAIRPERSON RIORDAN: Here.

BOARD CLERK VEJAR: Supervisor Roberts?

Professor Sperling?

BOARD MEMBER SPERLING: Here.

BOARD CLERK VEJAR: Dr. Telles?

BOARD MEMBER TELLES: Present.

BOARD CLERK VEJAR: Supervisor Yeager?

BOARD MEMBER YEAGER: Here.

BOARD CLERK VEJAR: Madam Chair, we have a quorum.

ACTING CHAIRPERSON RIORDAN: Thank you.

Good morning, again, everyone. My name is Barbara Riordan, and I'm going to be the Acting Chair today.

I do have a few announcements before we begin our meeting.

Most of you know that we have a closed session that appears each month as a standing item on our agenda to receive reports on various greenhouse gas lawsuits in which we are litigants. We would like to let everyone know that the closed session notice for today's meeting has been canceled.

Also, there's just a minor change in today's agenda. Immediately following the Board vote on the tire

inflation regulation -- that's Agenda Item 9-3-2 -- my fellow Board members and myself invite you to join us across the street at the Goodyear facility located at the corner of 11th and I Street -- that's literally behind our building -- to view a brief demonstration that the Goodyear people and our staff have arranged for us on how this regulation that we are going to hear will be applied in the real world.

We will be joined by the Chairman of the Integrated Waste Management Board as well as the Rubber Manufacturers' Association.

This will be a very brief demonstration and then we will be back hopefully in less than 20 minutes.

Also, as the Chairman has always maintained a three-minute time limit, I, too, am going to do that. And I'm hoping that when you come to the podium that you immediately give us your name and the organization you represent, if you represent an organization, and then go right into your testimony.

We would appreciate it if you would use the time in your own words. Any written testimony is submitted to our Clerk and will be made part of the record. We'd prefer to hear from you directly on your main points.

There is someone who will time your presentation. And so at the end of the three minutes, we will ask you to

conclude.

Also, for safety reasons, let me just remind you that in the back of room are the emergency exits. And in the event of a fire alarm, we are required to vacate this room immediately and go downstairs and out of the building. And then there's an all-clear signal to indicate it is safe to return to the hearing room and resume our hearing.

Fortunately, we have today as a first item one that I think you will find very interesting. And this is our health update. And if I might, let me invite our Chief Executive Officer to introduce this item. Mr. Goldstene.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Madam Chair. Good morning.

In recent health updates, staff described the impacts of air pollution on children's health, including decreased lung function in asthmatic children with prenatal pollutant exposures, increased incidences of asthma and allergic affects with exposure to indoor chemicals and increased risk of adverse respiratory symptoms with wildfire smoke exposure.

Today, staff will report on a recently published study that detected associations between air pollution exposure and childhood hay fever and respiratory

allergies. The findings presented in this update suggest that impacts on children's health related to ambient air pollution exposures may be more wide ranging than previously recognized.

Dr. Lori Miyasato from the Health and Exposure Assessment Branch will make the staff presentation.

(Thereupon an overhead presentation was Presented as follows.)

DR. MIYASATO: Good morning, Madam Chair and members of the Board.

In this health update, I will provide a brief summary of the recently published study that showed an association between air pollution exposures and childhood respiratory allergies.

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DR. MIYASATO: Respiratory allergies are a common chronic condition in children. There appears to be a wide variation in prevalence. However, it is estimated that up to 40 percent of U.S. children are affected by allergic rhinitis, which includes hay fever and other respiratory allergies.

Respiratory allergies also contribute to school absences and activity limitations. It is thought that environmental factors, including air pollution, may play a role in the worsening of respiratory allergy symptoms.

Associations between air pollution and childhood allergies have been reported in studies conducted in Europe and Asia, but there has been some variability in the results. This may be due to location-specific effects, such as the presence of different types of pollen and other allergens. Thus, it is important to determine the effects of air pollution on childhood allergies in the U.S. However, comprehensive studies conducted in this country have been lacking up until now.

Today's update will focus on a recent publication by Jennifer Parker of the National Center of Health Statistics and Colleagues. Their study is the first to examine a large nationwide sample of U.S. children and their respiratory allergies with respect to air pollutant exposures.

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DR. MIYASATO: There were over 72,000 children ages three to 17 years in this study. The households in which these children lived were sampled as part of the National Health Interview Survey between the years 1999 and 2005. Almost eight percent of these children lived in southern California.

Air pollutant monitoring data used in the study were taken from the U.S. EPA's air quality system. Annual averages for PM2.5, PM10, nitrogen dioxide, and sulfur

dioxide were examined in combination with the health survey data.

Ozone averages were examined for the summer months only when ozone levels are typically high. The analysis controlled for the children's race, ethnicity, age, sex, and a number of other factors.

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DR. MIYASATO: The study determined that 19.2 percent of the children had hay fever, respiratory allergy, or both as reported by the adult survey respondents. For the remainder of the talk, I will refer to these conditions as allergies.

Increased reports of allergy exacerbation were associated with increases in pollutant levels. For every 10 PPB increase in average summer ozone level, there was a 20 percent increase in the likelihood of allergy exacerbation with a possible range of values between 15 percent and 26 percent.

Additionally, for every 10 microgram per cubic meter increase in average annual PM2.5 concentration, there was a 16 percent increase in the likelihood of allergy exacerbation with a range of four percent to 30 percent.

The greatest ozone effects were seen in children from higher income families. Although the reason for this

effect is unclear, the author speculated that it might have been due to under reporting by parents in lower income groups or over reporting by parents in higher income groups.

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DR. MIYASATO: No associations were detected between reported allergies and annual levels of nitrogen dioxide or sulfur dioxide.

While these results show clear associations between ozone and PM2.5 exposures in childhood allergies, some of the study's limitations should be noted.

The analysis was based on annual PM2.5 and summer-ozone concentrations and may not reflect short-term changes in pollutant levels.

Additionally, survey reports of children's allergies were dependent on parental recall of the previous 12 months. Thus, memory limitations may have been an issue.

Furthermore, the survey provided an incomplete record of smoking exposures. Nevertheless, the study provides useful insight into the role of air pollution exposures in childhood respiratory allergy exacerbations.

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DR. MIYASATO: The findings from the study are consistent with the results of some previously conducted

studies.

One prior study conducted in six U.S. cities by Dockery and colleagues at Harvard showed a trend toward increased hay fever rates with higher ozone concentrations. However, this trend was not significant.

A German study published last year by Morganstern and colleagues described an association between long-term PM2.5 exposure and increased hay fever pollen sensitization in children.

Also, a study in the Netherlands by Jensen and colleagues found increased pollen sensitization in children near roadways with high truck, but not car, traffic.

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DR. MIYASATO: In conclusion, exposures to ozone and PM2.5 can worsen childhood allergy symptoms. Thus, continued reduction in ambient ozone and PM2.5 levels would be expected to reduce allergic symptoms in children as well as reducing the number of school absences per year.

This concludes the health update. We will be happy to answer any questions. Thank you.

ACTING CHAIRPERSON RIORDAN: Thank you very much.

Board members, are there any questions?

Dr. Balmes -- or comments.

BOARD MEMBER BALMES: You know me too well.

I actually want to make a comment rather than a question. So I think this is an important study. I'm glad that it was highlighted. There's a lot of evidence experimentally in humans as well as animals that oxidant pollutants like ozone, NO2, and diesel exhaust particles can enhance allergic responses. So this epidemiologic study really supports that experimental -- or goes together with that experimental evidence.

But I just wanted to point out that with regard to climate change, which is one of our major preoccupations these days, ozone levels are expected to go up, as probably most of you know, but also there's supposed to be changes in allergen exposure. For example, ragweed will have a longer growing season projected in terms of climate change projections and actually more potency of ragweed pollen. So the interaction between air pollution and allergies is going to increase according to the climate change projections.

ACTING CHAIRPERSON RIORDAN: That's interesting.

Is there any -- is there a response?

And then Dr. Telles and then Supervisor Yeager.

Dr. Telles.

BOARD MEMBER TELLES: Thank you for presenting this article, because I think again like Dr. Balmes

indicates, it highlights the fact that children are vulnerable. It was interesting in reading the discussion that adults are much less vulnerable than children, and it probably has a lot to do with the biology of children where they're breathing in faster, things like that.

I thought it was interesting also in the article that urban areas are much more significantly affected than rural areas. It again pointed out that there's a lot of compounding factors in rural -- I mean urban areas versus rural areas.

I think perhaps one explanation for the difference in the disparity between income groups and results as far as the impact on allergy. Maybe the fact that low-income groups may not live in areas of the city where there's a lot of horticulture plants, ornamental plantings that are probably one of the major sources of pollen in an urban area.

Thanks for presenting the article. It was good.

ACTING CHAIRPERSON RIORDAN: Thank you.

Supervisor Yeager.

BOARD MEMBER YEAGER: Yes. Maybe a question for you, Mr. Goldstene, and sort of following up on what Dr. Telles was saying.

And I mentioned this at our last meeting. My concern is that it's in these heavy transportation freeway

corridors where the price of land is the cheapest. It's often where cities then will build low-income housing for, you know, affordable housing just because it's less expensive to do it there. And certainly you have people living there at the highest risk.

And I didn't know if we were moving anywhere towards trying to set a limit from how far -- from some of these transportation corridors we would allow housing or if other cities in California -- cities in general in California, or are we restricting housing next to busy transportation corridors? Or is there any movement towards doing that as we get more of this information from these studies about what the effects are, particularly on children?

EXECUTIVE OFFICER GOLDSTENE: We haven't imposed a hard limit, but we do have recommended best practices.

Ms. Terry can expand on that.

DEPUTY EXECUTIVE OFFICER TERRY: Yes. I think we discussed this a little bit last month. And the Board did approve recommended advice to local governments on this issue of siting sensitive land uses, whether it's residences or schools or medical facilities. And we recommended not siting them within 500 feet of freeways or major arterials with high volume traffic. And that is based on a very expansive literature on health effects

associated with proximity to roadways.

And the reason we came up with the 500 feet was based on the science of exposure rather than absolute risk, because we see that within about 500 feet of those roadways, 80 percent of the exposure drops off.

And so the good news is as we implement all of our truck rules, our vehicle standards, the pollution is going down. We still get a benefit of an 80 percent reduction, no matter what the absolute level of exposure is.

Now, I just met a couple of weeks ago with a representative from our State Housing and Community Development Agency. And they have been hearing a lot about this issue from the locals. And, in fact, some locals have begun to adopt these hard and fast limitations.

Now, there is a big concern about that, because obviously the affordable housing issue in the state is a really critical one. And so we jointly agreed to do some work on trying to identify mitigation and look at design and those things that could aid in meeting both goals, having affordable house and meeting the housing needs and minimizing the exposures.

So that was one of the reasons that the Board adopted this as an advisory opposed to a hard and fast

requirement.

BOARD MEMBER YEAGER: It will be interesting to see cities what they do, if they stop building within 500 feet or whether they continue doing that and if we need to look at coming up with something advisory rather than a hard rule. But maybe we can see that over time.

Thanks.

ACTING CHAIRPERSON RIORDAN: Supervisor Yeager, one of the things that this document is very well written, and I would commend it to any of us to reread, because it gives us some excellent direction.

But it reminds me also that we have to continue to do the outreach, because boards of supervisors change, as well as city councils change.

And staff has heard me say this a million times, but I was just reminded of it the other day when I spoke to one of my local agencies. And I think we just have to go back each and every two years and try to reach out to the new members of those city councils and boards of supervisors to tell them that this document is available. And I think they will follow it and take it as a wonderful guideline, but we just have to remind them that it's there. That's the real critical part.

So I do thank you.

And are there any other comments related to the

study that was brought by the staff?

If not, then I'm going to move on and thank the staff very much.

And we're going to move onto the next item.

And while the staff is changing there, let me just make this beginning announcement.

For our consideration, this is a proposed regulation to reduce greenhouse gas emissions from vehicles operating under -- with underinflated tires. This regulation proposal is the seventh of nine discrete early action measures included in our Scoping Plan. These measures were designed to achieve greenhouse gas emissions reductions beginning in 2010.

And, Mr. Goldstene, would you like to introduce this item if the staff is all ready here?

EXECUTIVE OFFICER GOLDSTENE: Thank you, Madam Chair.

Today, we're proposing a regulation that reduces emissions from vehicles operating with underinflated tires.

As you know, the AB 32 Scoping Plan identified sector-specific goals to meet the greenhouse gas emission reduction targets from the transportation sector, which is the largest contributor of the State's total greenhouse gas inventory.

The tire inflation measure is one of the proposed vehicle efficiency measures aimed at reducing the emissions.

As you'll see in the staff's presentation, the proposed regulation would reduce greenhouse gas emissions by ensuring that passenger vehicle tires are properly inflated.

Proper tire inflation decreases rolling resistance and correspondingly lowers fuel consumption.

Staff is proposing a rule that would require automotive service providers to perform a tire pressure check and inflation service on all passenger vehicles brought in for service or repair.

In addition to the reduction in greenhouse gas emissions, the proposed regulation also provides environmental and safety benefits. Properly inflated vehicle tires result in increased tire life, thus reducing the amount of tires entering the waste stream annually. And proper tire inflation also improves vehicle handling and decreases the chance of a blowout.

In addition to this proposal, staff plans to continue working with the California Energy Commission on the benefits of an inflation pressure loss rate standard for tires. This standard would improve the air retention rates for tires sold in California.

This effort would be coordinated with the Energy Commission's fuel efficient tire program to provide a complete package of tire improvement measures.

Staff also plans to continue outreach efforts in conjunction with other agencies to improve consumer awareness and promote the benefits of proper tire inflation.

I'd like now to have Theresa Anderson from our Stationary Source Division present the staff's proposal. Mr. Anderson.

(Thereupon an overhead presentation was Presented as follows.)

MS. ANDERSON: Thank you, Mr. Goldstene. Good morning, Madam Chairman and members of the Board.

It's my pleasure today to present staff's proposed regulation for vehicles operating with underinflated tires.

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MS. ANDERSON: This slide presents the topics I will cover in this presentation.

I'd like to start by giving you an update on staff's regulatory development and outreach efforts.

Staff began developing the regulation in July 2007.

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MS. ANDERSON: Since then, staff met with over 70 individual stakeholders, including the Automotive Aftermarket Industry Association, Automotive Service Council, Automotive Wholesalers Association, California Motorcar Dealers Association, and the Rubber Manufacturers Association.

Staff held two public workgroup meetings and one public workshop and mailed over 40,000 workshop notices to all automotive service providers in California.

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MS. ANDERSON: AB 32 directed ARB to identify a list of early action measures.

In 2007, the Board identified 44 such early action measures. From these measures, the Board identified nine as discrete early action measures, including the measure to reduce greenhouse gas emissions from vehicles operating with underinflated tires.

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MS. ANDERSON: As you know, the transportation sector is the largest contributor to the State's greenhouse gas emissions inventory. The transportation sector --

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MS. ANDERSON: -- produce approximately 40 percent of the total statewide greenhouse gas emissions,

and passenger vehicles account for 75 percent of the transportation emissions.

The proposed regulation would help reduce greenhouse gas emissions from the transportation sector by reducing the fuel consumption from passenger vehicles operating with underinflated tires.

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MS. ANDERSON: The regulation will apply to all passenger vehicles with a gross vehicle weight of 10,000 pounds or less. Staff estimated that almost 30 million vehicles will be affected. Examples of the passenger vehicles that would affected are included on this slide.

Other vehicles affected, virtually all are gasoline fueled. Therefore, the regulatory impacts are based on the assessment of gasoline vehicles only.

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MS. ANDERSON: To estimate the number of vehicles with underinflated tires, staff used the National Highway Traffic Safety Administration's on-road tire pressure survey.

From the survey data, staff was able to estimate the percentage of vehicles found to have at least one tire that was severely or moderately underinflated. Staff estimates that approximately 20 percent of all affected vehicles have severely underinflated tires and

approximately 33 percent have moderately underinflated tires.

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MS. ANDERSON: The regulation was developed to meet the goals of AB 32, including the requirements to adopt regulations to achieve the maximum technologically feasible and cost effective reductions in greenhouse gas emissions.

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MS. ANDERSON: The regulation will affect almost all of the 30 million vehicles on the road in California during the period 2010 through 2020. In addition, the regulation affects approximately 40,000 automotive service providers.

Examples of these types of facilities include automotive service repair, changed or instant oil change, tire sales and service, test-only smog check centers, and car dealerships. The regulation would take effect in July 2010.

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MS. ANDERSON: Staff has identified a number of facility types that are not involved in vehicle service or maintenance and should be exempt from the regulation. These facilities include auto body, collision, and paint facilities, glass and windshield repair/replacement

facilities, auto part sales, wrecking and towing companies, and miscellaneous service facilities, such as car washes and detailing shops.

In addition, automotive service providers would not be required to check and inflate tires considered to be unsafe.

Tires that are filled with pure nitrogen are only required to be checked, not filled, if the automotive service provider does not supply nitrogen.

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MS. ANDERSON: Automotive service providers that operate in the state and perform automotive maintenance and repair services will be required to check inflation and inflate, if necessary, for all vehicles brought in for service or repair.

The service provider would indicate on the invoice that a tire inflation service was complete as well as the tire pressure after the service was performed.

To properly check and inflate a vehicle's tires, all automotive service providers will be required to use a tire gauge that meets specific accuracy requirements as well as have access to a tire inflation reference resource that will be used to assist personnel in determining proper tire pressures.

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MS. ANDERSON: ARB staff will enforce the requirements through audits and consumer complaint investigations. Audits and investigations would entail a review of invoices to ensure that the check and inflate service is being performed.

Staff also plans to work with the Bureau of Automotive Repair and local air pollution control agencies who currently visit these types of facilities.

In addition, staff will partner with the Bureau of Automotive Repair and implement an extensive outreach program aimed at both the facilities and consumers to educate them about the regulatory requirements and the benefits of proper tire inflation.

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MS. ANDERSON: The emission reductions achieved by this measure are a direct result of reducing fuel consumption. Proper tire inflation reduces rolling resistance, which reduces fuel consumption.

By reducing tire rolling resistance, tire life is also extended, which reduces tire waste and results in additional emission reductions.

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MS. ANDERSON: The regulation would ensure that as vehicles have other services, tire pressures are checked and severely and moderately underinflated tires

are properly inflated.

This is estimated to reduce fuel consumption by approximately 90 million gallons and reduce tire waste.

This reduction in fuel consumption is expected to reduce greenhouse gas emissions by .6 million metric tons in 2020.

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MS. ANDERSON: In addition to greenhouse gas reductions, staff expects PM reductions to be approximately 40 tons per year.

As with other measures that reduce PM2.5, staff estimates fewer premature deaths. Additional benefits include fewer cases of asthma and bronchitis, as well as fewer lost days at work and minor restrictive activity days.

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MS. ANDERSON: An additional benefit from properly inflated tires is prolonged tire life. Staff estimates that prolonging tire life due to proper tire inflation is equivalent to removing an estimated 700,000 tires Californians generate as waste annually.

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MS. ANDERSON: To estimate the regulatory costs, staff analyzed the economic impacts to both the automotive service providers and consumers.

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MS. ANDERSON: Automotive service providers are expected to incur additional labor costs and minor capital and operating costs.

Labor costs are expected to be the primary cost associated with the tire inflation procedure. Based on five minutes of labor and a mean total compensation rate of approximately $22 per hour, the total labor cost was estimated to be less than $2 per visit.

The capital and operating costs are estimated to be approximately 60 to $70 per facility, per year, for tire gauges, reference resources, and any engineering needed to tap into compressed air lines.

The total cost for all automotive service providers is estimated to be approximately 100 million annually.

Staff believes that automotive service providers are likely to pass these costs onto the consumers.

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MS. ANDERSON: It is expected that California consumers will save on average about 75 million of fuel per year and will benefit from prolonged tire life.

Average annual benefit is estimated to be approximately 250 million and 90 million per year respectively.

Based on the annual savings of 340 million and an annual cost of 100 million, staff expects an overall annual savings that will average $8 per vehicle per year.

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MS. ANDERSON: This slide summarizes the benefits and costs of the proposed regulation. The cost effectiveness of the regulation is estimated to result in a net savings of $320 per metric ton of CO2.

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MS. ANDERSON: Staff is proposing 15-day changes to current proposed regulation. Vehicles that have received the check and inflate service within the last 30 days would be exempt from having the check and inflate service performed. An additional tire pressure service will not result in additional benefits.

Staff is recommending that the Board direct staff to work with the Bureau of Automotive Repair to discuss recent identified issues pertaining to the service providers' role in implementing the check and inflate requirement and incorporate changes as appropriate.

BAR is concerned under the Automotive Repair Act licensed automotive service providers are prohibited from performing repair services unless authorized by the customer and are required to allow the customer the chance to decline any service.

This regulation would require the tire check and inflate service be mandatory when otherwise unrelated services are performed. We believe that AB 32 conveys the needed authority to the ARB to establish such a mandatory requirement, and this regulation can be implemented consistent with the Automotive Repair Act.

Staff proposes to continue to work with BAR to ensure that the purpose and goals of both AB 32 and the Automotive Repair Act are fully met.

Based on the comments recently received, staff is proposing two additional changes to clarify that NC Grade B or equivalent tire pressure gauges can be used and automotive service providers need only to have access to a current tire pressure resource.

Finally, staff has added minor administrative updates to provide clarity to the proposed regulation.

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MS. ANDERSON: Staff considered three alternatives: A consumer education and outreach program, the use of pure nitrogen only, and require retrofit of vehicles with tire pressure monitoring systems.

After evaluating each of the three alternatives, staff determined that the proposed regulation was the most cost effective means of achieving the needed emission benefits.

In addition to the current proposal, staff is investigating an inflation pressure retention standard to decrease the rate of air loss for all tires sold in California. The permeability standard would not replace the check and inflate requirement. Since the permeability rate is part of the tire's overall efficiency, ARB staff are working closely with the California Energy Commission. The Energy Commission has been tasked with adopting a statewide tire efficiency program as part of AB 844.

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MS. ANDERSON: Staff concludes that the proposed regulation is an effective way to reduce greenhouse gas emissions associated with vehicles operating with underinflated tires. It will achieve emission reductions, is cost effective, and meets all your requirements under AB 32.

Staff, therefore, recommends that the Board approve the proposed regulation with the 15-day changes as presented.

This concludes my presentation, and we would be happy to answer any questions you may have.

ACTING CHAIRPERSON RIORDAN: Thank you very much for that well-organized presentation.

Let me ask Board members, are there any questions?

Ms. D'Adamo.

BOARD MEMBER D'ADAMO: I have some questions regarding where the auto industry seems to be headed regarding monitoring systems and if eventually that may be the standard, whether we impose it or the industry as a whole goes in that direction.

And then, secondly, just some more information on tire permeability standards.

MR. MIGUEL: This is Mike Miguel, Manager with the Project Support Section, SSD.

The tire pressure monitoring systems were federally mandated for all new vehicles beginning in 2008. So when we put together the inventory, we actually offset our baseline inventory to account for vehicles as progressively more and more vehicles have the systems on board.

What we looked at is, today, what would it take cost wise to retrofit all of the existing vehicles with those systems.

You're absolutely right. As we move forward in time, all of the vehicles will eventually have these tire pressure monitoring systems. And this regulation may become moot. What we would need to do is continue to monitor the situation, and if tires -- we see them that are not underinflated, this regulation, we probably could

take off the books.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: The existing systems are designed with safety in mind, not to keep the tires absolutely properly inflated.

So, for example, a general scale is until it's 25 percent underinflated, the monitor is not required to tell you you have a problem.

So you could have a great deal of underinflation and lose fuel economy and have higher GHG emissions and still not trigger the monitor. We think as the interim over the next decade, the inflating the tires makes sense. Ultimately, obviously what we'd like to have are tires that don't permeate and systems that tell drivers, gives them much more information when there is a problem and we'd work on that.

But in the interim, given that this is cost effective, consumers on average will save money. It seems to make sense to put it in place and implement it over the next ten years.

BOARD MEMBER D'ADAMO: And I've been told by some tire dealers that there may -- that monitoring systems may not give accurate information as far as tire pressure if you rotate the tires. Are you seeing any evidence of that?

MR. MIGUEL: Personal experience, yes.

(Laughter.)

MR. MIGUEL: That is absolutely true. There are some -- they're relatively new systems, and they're working out the bugs. But for the most part, they do their jobs. And if -- the technical experts need to be able to reset the systems. And sometimes there are drawbacks to them. But they do monitor the systems.

Some of the systems out there only have dummy lights. They don't actually tell you which tire is underinflated. And, again, it is 25 percent, which could translate to as much as six to eight PSI underinflation. We consider that severe.

ACTING CHAIRPERSON RIORDAN: Thank you for the question.

MR. MIGUEL: The second question you had in terms of permeability, that's what we're looking at right now. All tires sold in California can range in permeability from one percent to five percent.

Certain industry vehicle tires -- or tire manufacturers already have tires that meet certain standards for -- vehicle manufacturers require that they meet a certain permeability rate. We're looking at setting that as a standard statewide.

ACTING CHAIRPERSON RIORDAN: Supervisor Yeager, did you have something?

BOARD MEMBER YEAGER: Mr. Goldstene, I know that when we had a conversation with staff on this item, I had asked why used car dealerships and car dealerships were not included, and you had said that for any new car dealership service repair or I suppose even a used car lot that had a repair would be covered by this. But the other ones weren't.

I didn't know if you had a moment to think anything more about that, whether there would be an advantage to including used car dealerships and auto dealerships in the regulation. Obviously, a lot of people are buying cars off that lot and think that maybe they can go for a while without needing to inflate the tires. It seemed it was an opportunity to make sure that the tires were inflated.

EXECUTIVE OFFICER GOLDSTENE: The kind of car lots you're talking about are the so-called iron lots where they're really not set up for any kind of repair. They may or may not have a compressor. We were trying to keep the cost of this rule down and maximize its effectiveness.

I'll ask staff if they want to add to that.

MR. MIGUEL: Another thing we looked at is a smog check is good for 90 days prior to the date of sale. So knowing that, we figured any car that was recently sold

would go through the smog check process.

ACTING CHAIRPERSON RIORDAN: Thank you.

Dr. Telles.

BOARD MEMBER TELLES: This is a mandatory regulation. Making it mandatory if you go in and get your car checked, you need to have your tires pumped up.

And it's estimated that the expense to the industry that's doing this is going to be $100 million, and that expense will be passed on to the consumer.

What guarantees do you have that it will be $100 million passed on to the consumer versus $200 million or $300 million? And that's very important when you're doing your cost estimates. Does the Bureau of Automotive Repair have a set fee for this, or can that be done?

EXECUTIVE OFFICER GOLDSTENE: The Bureau of Automotive Repair doesn't set the fees. And generally the service charges for anything from a smog check to an oil change are controlled by the market.

We were evaluating the incremental cost based on the average hourly rates of what it would take to do this if those cost were passed on.

The fact is most of the time when we bring our car in for most regular service, our tires are checked as just part of the regular service. So the actual cost might actually be significantly less.

Do you want to add anything on to that?

MR. MIGUEL: That's absolutely right.

In fact, several industries already perform that as a package service. So the cost could be as much as zero to, you know -- we can't predict what profits they may try to get from the consumer as well. So it could have a range, but these costs we put together are relative to the actual service.

BOARD MEMBER TELLES: Yeah. I mean, it may be that they don't charge anything, because it's already being done. But now that you're mandating them to do it, now they'll charge something. You know, whenever these things come up and the consumers of the state of California are going to be paying $100 million with no even minor little control over a $4 charge.

It seems to me that when we do something like this and make it mandatory, there ought to be at least a mandatory fee attached to it and that it not exceed that.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: We are relying on basically the marketplace to control it.

What we can do is we'll be out there in the field assessing how compliance is going. And that's part of the operation we'll see whether or not firms are charging and how much they're charging. And if it seems to be abused, we can bring it back for reconsideration and see if that's

necessary.

BOARD MEMBER TELLES: Will you do that?

EXECUTIVE OFFICER GOLDSTENE: Be happy to.

ACTING CHAIRPERSON RIORDAN: I can only tell you from personal experience, as someone who relies heavily on those who are servicing her vehicles, to check the tire pressure. And I think initially probably they're checking it for safety concerns, at least I hope so. But I think a lot of people rely on service facilities to check tire pressure.

If it weren't done for me, for instance, I would be very unhappy. I just know that it is done. It's something that I just do traditionally. Always have.

Mayor Loveridge.

BOARD MEMBER LOVERIDGE: Essentially building on your comments, but this is where the safety one -- just I am not sure in exemptions what unsafe tires are. I mean, what -- what is this category of unsafe tires that are exempted?

MR. MIGUEL: We had some feedback from the automotive service providers that they were worried about liability. If a tire comes in, for example, is bald and underinflated, there were two things they were looking at. One side, the tire industry is saying a bald tire that's properly inflated is safer than a bald tire that's

underinflated. But the industry is saying that, well, if we go out and fill a bald tire, and then they go out and get in an accident, they could be held liable.

So, we came up with a compromise that we would allow the automotive service providers if they found a tire that they deemed according to industry standards to be unsafe, that they could the customer on the invoice that you have an unsafe tire, you need to have it replaced and have it properly inflated.

BOARD MEMBER LOVERIDGE: The second is just what is not here is one of the benefits -- and I'm not sure how you identified the data. But the safety question of in terms of accidents, how many accidents are prevented by having tires properly inflated versus those that are not.

MR. MIGUEL: Yeah. We did not have actual numbers as to lives saved or reduced accidents or improved handling in any percentage, per se. All the documentation and studies we've had dictates that your vehicles will have improved handling and reduce accidents. We didn't have any specific numbers as to what those were.

But everybody states that improved safety and handling of the vehicle is a benefit of having properly inflated tires.

ACTING CHAIRPERSON RIORDAN: Okay. Ms. Berg.

BOARD MEMBER BERG: Good morning.

I absolutely agree that this is a low-hanging fruit issue.

One of my concerns is that on the unsafe tire, I believe the consumer should have to decline having the tires filled. So it should be checked. And then if the consumer declines, so be it.

Also, I am concerned that we might be a little bit optimistic that we're going to get 80 percent of the 53 percent of the vehicles that are underinflated.

I think when you look at the severely underinflated category, my guess would be that these individuals do a lot of home repair maintenance and only go into a maintenance facility if, in fact, it means their car is running or not running.

And so I will be interested in some of the feedback you're getting.

And I think it's critical if we can't get the Bureau of Automotive Repair as a team for -- to help with the enforcement of this, I think that is going to be a real setback. So I really encourage whatever we need to do to get good partnership going. I think that's important.

The last thing I'd really like to understand is the penalty issue and if the comments by the California New Car Dealership Association has been addressed with the

thousand dollars per violation and up to six months in prison. It does seem to be a little excessive to me.

SENIOR STAFF COUNSEL POPPIC: Good morning. George Poppic with the Office of Legal Affairs.

The Global Warming Solution Act simply refers back to Part 4 and Division 26 of penalties that are set out. Those penalties can be either criminal or civil. But it's the statute that sets the penalties. ARB does not.

BOARD MEMBER BERG: Okay. Thank you.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: Those are penalties that up to. And of course we'll have to develop an enforcement policy over what is the right way when we find violations to remedy them and what role the penalties play versus agreements to abide by the regulation.

And most of us think that once we get the word out on this and they see that it is in force, it's not an onerous thing to do for the business, terribly onerous one. And that there will be a high compliance rate if we do a good job of education.

BOARD MEMBER BERG: I'm glad you brought that up. I do think the outreach probably along with a partnership of the Bureau are probably the two critical issues in order to make this low-hanging fruit, in fact, a reality.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: And one other

thing to mention. We just didn't rely on the national statistics. We actually had a test program where we went out in a couple of locations. And as cars came in, we tested them for their air pressures. And we found the current situation on the road in California similar to what the national statistics told us. And I don't think we found it was biased necessarily to older cars or cars that you would consider probably didn't get service very often.

We can look at that. It's across the board. I mean, none of us really like to be leaning over and doing the testing of the air pressure.

BOARD MEMBER BERG: I can attest to that, because I do have run flat tires. And run flat tires have to be filled in between the service if you want to keep them at optimal levels.

So, that is true.

ACTING CHAIRPERSON RIORDAN: Thank you.

I'm going to now open it up for public comment. We have Pamela William, Mike Flanigan, Pete Montgomery. If you'd come forward, please, and give us your name and who you represent. And we'll monitor the time. And thank you for your participation.

MS. WILLIAMS: Thank you. Good morning, Board members. My name is Pamela Williams. I'm Senior Vice

President of the California Retailers Association. We represent many of the automotive service providers that will be subject to the regulation that you're considering this morning.

We are asking you for an additional change in the regulation in addition to the 15-day changes that staff referred to earlier in their presentation.

We're not opposing the regulation. We are willing to accept as an industry the mandate that we perform the tire checks. I think it's clear from the staff report the benefits that will be derived in terms of gallons of gasoline saved and the resulting emissions reduced, as well as other safety issues.

So we are willing to accept as an industry the mandate that we perform the checks, that we document the checks, and that records be maintained to prove and support that these have occurred.

What we are concerned about obviously, and not surprisingly I'm sure, is the cost of the regulation. The $100 million a year that staff is estimating will be upon the service providers to comply with the regulation.

One of the main issues driving the cost for us is not so much the labor, because the people are already there. They're already employed. They're already providing a service. It's the use of the gauge that

you're mandating. And you're mandating an ANSI compliant gauge, which is very expensive. Not in broad use among many of our member companies. And we're asking that you eliminate that requirement from the regulation.

Now, my understanding, if I heard the staff, 15-day notice proposal is that they're modifying that to say we can use ANSI compliant gauges, which would still not be acceptable to us, because the issue is, as we said in our testimony to you, written testimony yesterday, this isn't rocket science. We're talking about tire gauges putting air in a tire, if you have a tire gauge and you know how to put the gauge in the tire and check it.

The only difference that we're quibbling about is probably a tiny bit of PSI difference. You know, is it one-tenth of one percent more accurate? Maybe they are. But for the exchange in terms of the cost savings to industry for being able to use the existing gauges that have worked for decades versus the ANSI compliant gauges which are expected to purchase and some argue are difficult to find -- can't validate that. But I do know they're expensive. That would be the change that we would ask you to make.

It would reduce the cost of implementation. You're still going to get the majority of the savings and the emission reductions that you wanted. So your goal

will still be met only perhaps by, you know, slightly off in terms of the percentage of PSI accuracy between the pencil gauges and the ANSI compliant gauges.

And also as a reminder, you all did a great job back at the State Fair last summer of handing out the pencil gauges. So we are assuming that's since you handed them out and had a great PR project going that they were adequate at that point in time.

We're hoping that you'll make that modification today. We appreciate your time.

ACTING CHAIRPERSON RIORDAN: Thank you for your testimony. Let me ask staff for a response.

MR. MIGUEL: We recognize that -- I talked to Pamela earlier. And our intent was to have gauges of a certain accuracy. If we're going to try to correct a problem down to one PSI, we need to ensure that the gauges these service providers use are at least that accurate.

What we've changed is rather than requiring a specific gauge, we're requiring that the gauge meet a certain standard. So if they have a gauge in their shop that is within plus or minus two percent and they can verify that these pencil gauges are accurate by comparing it to that devise, that would suffice for us. We're just trying to make sure that the gauges that they're using are within a certain accuracy.

ACTING CHAIRPERSON RIORDAN: Okay. Yes.

Ms. D'Adamo.

BOARD MEMBER D'ADAMO: Well, who performs the test?

MR. MIGUEL: They could do it in shop. And when we come out for enforcement, we could check to see let's evaluate the gauges that you're using or how you're determining the accuracy of those gauges.

BOARD MEMBER D'ADAMO: What's the difference in price between a pencil gauge and one of these other --

MR. MIGUEL: A pencil gauge you can get for a buck or two. The ANSI certified gauges that we did research on were around -- average around $25.

The problem is is these gauges in these shops usually only last about a couple years due to the environment that they're used in. So we actually in that 100 million cost assumed a replacement cost of every two years.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: I think our view is that the cost of a gauge that we know is accurate is not excessive. And I think we feel that the -- if we don't have a specification, we're liable to use gauges that are plus or minus three PSI, four PSI.

The cheap gauges are not very accurate. So we need some standard in there that says if we're going to go

to all this trouble to have a requirement the tire be tested and re-filled, we need to have accurate measurement devices. And the cost as a part of total regulation is not that high.

BOARD MEMBER D'ADAMO: I guess the physician members on the Board would appreciate it seems like the difference in thermometers. Accurate thermometers, digital versus the old-fashioned mercury one that you shake.

ACTING CHAIRPERSON RIORDAN: Ms. Berg, did you have a comment?

BOARD MEMBER BERG: No. I think I'm just sympathetic to the fact that, you know, a dollar today is much more valuable than a dollar a year ago. And we're, you know, all kind of shell shocked right now. So when you're talking about a hundred million dollars, sounds like real money. Where when we talked about a hundred million dollars a year ago, it was something that needed to be spent.

So I'm wondering if staff has conducted any of their own comparisons on the gauges. In fact, are the gauges that are used within the current shops, do they have that great of fluctuation? Or are we talking about the people that would buy a gauge at home that would spend a dollar a gauge?

And so I'm really trying to assess as to are we giving industry the ability to comply with the rule in the most cost effective manner possible, so that we're not doing -- I just don't think we can one ounce burden today.

MR. MIGUEL: We did evaluate those, and the pencil gauges do have that element of close enough. Whereas, the dial type gauges you can actually read to the actual pressure. That's really the difference.

And the pencil gauges fluctuated anywhere from right on to plus or minus three PSI. That's just inherent in that type of device.

We handed those out at the fair as more of a means for the public to see the importance of checking your tire pressures.

ACTING CHAIRPERSON RIORDAN: Yes, Mayor Loveridge and then Dr. Sperling.

BOARD MEMBER LOVERIDGE: In looking at Pamela's written comments, there is a cost that identifies $25 for the gauge, but then $50 for the manual, which is the manual is the heavy cost item. What are -- what is this $50 for a manual we're charging? Where does the cost come from?

MR. MIGUEL: There were certain manuals that we researched to help the automotive service providers determine the accurate pressures for a specific tire to a

specific vehicle. Most vehicles when they come in have OEM tires on them or replacement OEM type tires.

BOARD MEMBER LOVERIDGE: So they need a manual?

MR. MIGUEL: Well, in instances where someone comes in with like high-profile tires or non-standard tires, they changed their rims, low-profile tires, there's not -- the pressure on the vehicle, the indicated vehicle recommended pressure, would not be appropriate for those types of situations. So you would need a manual to accurately determine what the pressure for that tire for this particular vehicle would be.

BOARD MEMBER LOVERIDGE: Why couldn't I just print out -- why can't I just print out the manual as opposed to --

MR. MIGUEL: We made that change. When we said manual, we meant resource. And that was part of the 15-day change we've made. If you can have access, whether it be hard copy, electronic version, or a shop has an internal program that they can type in the vehicle and the tire and it tells them what the pressure should be, that would suffice to us.

ACTING CHAIRPERSON RIORDAN: That seems quite a bit of latitude on that.

MR. MIGUEL: Yes.

ACTING CHAIRPERSON RIORDAN: Dr. Sperling. No.

Let's move on. Mr. Flanigan. And we have added one more speaker, Daniel Zielinski.

MR. FLANIGAN: Good morning. Mike Flanigan with the Flanigan Law Firm on behalf of Les Schwab Tire Centers.

And it always good and nice to follow Pamela. There's nothing really more I can add than what she's said. So I won't take up your time with that.

But we are submitting for the first time today our written comments. And I'm going to -- I guess we'll have a 15-day comment period to review some of the changes that the staff has offered this morning and might offer after review of our comments.

One thing we did not include that we'd like you to consider is an exemption for the fly-by. That's the lady or gentleman who pulls their car into the bay and says just check my tires. They don't get out of the car. Thanks a lot. Off they go. Instead of having them stop, wait a second, fill out the form, fill this and fill that. They just want a quick check and go. We do that for free at Les Schwab. We'd hope that maybe we don't have to stop that person in our morass of bureaucratic requirements and perhaps unnecessarily use their time if they're on the fly.

Thank you very much.

ACTING CHAIRPERSON RIORDAN: Thank you very much, Mr. Flanigan.

Maybe staff during the 15-day comment period can work that out. I'm not sure what.

STATIONARY SOURCE DIVISION CHIEF FLETCHER: Yes. We'd be happy to work that out.

ACTING CHAIRPERSON RIORDAN: Mr. Montgomery.

MR. MONTGOMERY: Thank you as well. Pete Montgomery. I represent a small nitrogen system refueling manufacturing company called N2 Revolution.

Really, the purpose of my comments is two-fold.

Number one, to thank CARB staff for the comprehensive report. Although nitrogen refueling was not chosen as a preferred option, this is acknowledged in the nitrogen refueling industry as one of the most comprehensive technical analysis of the benefits of nitrogen refilling, both from a tire life, but also from an emissions standpoint.

So we also greatly appreciate Mike Miguel and his staff for being responsive to our requests, albeit late -- came in late to the process -- to clarify that nitrogen refilling is a compliance option for ASP. Not a mandate, not something that they have to invest in, but it is an option for ASPs in terms of complying with this regulation.

Just for a quick restatement of some of the benefits of nitrogen refilling, which I'm sure aware from the report, improved pressure retention, which provides for improved fuel economy; longer tire life, improves safety, which I think was an important point bought up earlier. You get reduced rubber oxidation, reduced moisture content. All of those things we think are greatly added benefits on the side of nitrogen refilling.

We actually also think that nitrogen benefits are even greater than reported in terms of cost effectiveness. There's some difference in methodologies and how this was analyzed. We understand that. But we believe there will be lower costs with the new automated systems, which significantly reduce labor costs. And that scale will drive costs significantly lower than reported in the report.

Again, we also think that support for nitrogen refilling is very well aligned with the goals of AB 32. Job creation in a green manufacturing sector. Most of these are small businesses as well, which is another important goal of AB 32.

So, again, I just wanted to thank CARB for the great report and also thank staff for their willingness in the 15-day period to just include basically that nitrogen is a compliance option.

Our opinion was that the absence of nitrogen being mentioned meant the de facto since it's what's in practice now is just refilling with air.

Thank you very much for your report.

ACTING CHAIRPERSON RIORDAN: Thank you very much for your participation.

MR. ZIELINKSI: Good morning. My name is Dan Zielinski. I'm with the Rubber Manufacturers Association.

I wanted to take this opportunity to thank the Board for being so inclusive in formulating this regulation. We've had a good give and take with the staff.

RMA supports the overall policy goal of the check and inflate program. We think by increasing the incidents of properly inflated tires we will not only save fuel, we'll save money for consumers. We'll reduce greenhouse gas emissions. As said before, we can reduce the incidence or premature wear of tires contributing to the waste stream. And importantly, we can certainly improve vehicle and tire safety on the roadways.

We are aware that staff has been working to address some of the concerns. We have provided the Board with written comments. And we look forward to a continuing engagement as we work through some of those issues. But we do appreciate this chance. We appreciate

your participation later this morning at the event at Goodyear and look forward to seeing you there.

ACTING CHAIRPERSON RIORDAN: We look forward to seeing you there, too. Thank you very much for your testimony.

That concludes the testimony of the public today on this particular item.

Mr. Goldstene, do you have any follow-up comments?

EXECUTIVE OFFICER GOLDSTENE: The only thing I'd like to add that while we have the cost that was mentioned for compliance, which is an upper bound, there's also significant savings that are mentioned in the staff report in the like 2- to $300 million in terms of the reduced need to turnover your tires and charges going to the waste stream and other things.

ACTING CHAIRPERSON RIORDAN: Thank you.

Board members, while it's appropriate to discuss the item, let me remind you that I'm now going to close the record on this agenda item.

Dr. Telles.

BOARD MEMBER TELLES: It wasn't clear to me when you said that if you have a service station or whatever could check their own gauges. And to check their own gauges, they would need one of these gauges to check it

against. And that kind of defeats the purpose of their testimony.

Then there was one other -- you know, I was just not clear what you're -- it needs to be a little more solid than that as far as if there's going to be any written language in the comment period.

I have one other comment.

ACTING CHAIRPERSON RIORDAN: Yes. Go right ahead.

MR. MIGUEL: What we were referring to was we had a couple shops call and ask about, well, we have one of these type of gauges in the shop. And what we do is we compare to established traceability. All of the gauges that the technicians use to this one standard. And if it's off, we didn't use it. But we compare to it to establish traceability and ensure that that gauge is within certain accuracy.

So what we felt was that's good enough. As long as you can prove that the gauges that you're using in the shop meet a certain standard, we're okay with that.

BOARD MEMBER TELLES: One other question.

One of the written comments mentioned that there's no statement in the regulation in regards to whether you're measuring hot or cold tires.

MR. MIGUEL: Right. There was a lot of

discussion about that. And typically when a car comes in, they're always going to be hot. And it can take as long as three to four hours for it to cool down. It's recommended that all tires be checked and filled when they're cold. That scenario is just not going to play out in a quickie lube setting.

So what we've determined -- and we're going to publish a guideline that will be part of our -- available on our web and we'll make available to all the service providers. Is that you check and inflate the tires as is, which at a minimum gets it to the recommended pressure, knowing that when it cools down that they probably have to refill it.

So after the filling process has taken place, the automotive service provider would convey to the consumer that we filled it to the recommended pressure. Once you get home and the tires are cold, you're going to need to recheck it.

We would never deflate a tire. So if a tire comes in and it's over pressure -- let's say someone is keeping their tires properly inflated. Well, when they come in, they're probably going to be about four or five PSI above the recommended pressure, because it increases as the tire warms. We would never deflate a tire.

However, when we did our studies, as Mike

Scheible mentioned earlier, we found a couple cars that came in at 90 PSI. And he said, "Don't touch my tires." I said, well, those are double what the recommended pressure is. He goes, "I know, but my gas mileage is perfect."

(Laughter.)

MR. MIGUEL: In that instance, we would make a note -- you know, the service provider would make a note that the tires are overinflated. And the consumer needs to know that.

BOARD MEMBER SPERLING: Chairman?

ACTING CHAIRPERSON RIORDAN: Yes, Dr. Sperling.

BOARD MEMBER SPERLING: I hate to belabor this issue, you know, but it is something we deal with in our lives all the time. So we're all more interested than normal.

(Laughter.)

BOARD MEMBER SPERLING: One little thing is about the measurement. You know, these are devices that are measuring the pressure. Are they the same -- I don't know how this works. Is this the same device that's also connected to the compressor that's putting the air in? Are we talking about two different things?

MR. MIGUEL: They can be both. You can have a stand-alone or a device that's connected to the

compressor. In fact, the ones you see at some refueling stations have a build in. It's that type, but it would obviously more accurate.

ACTING CHAIRPERSON RIORDAN: Okay. Ms. Berg.

BOARD MEMBER BERG: I would just like to make sure that in the 15-day change you have the ability to review and make sure that the manual -- what is necessary for the body shop to purchase if they can get the information on line, that we continue to look at every bit of cost that we can bring down, including the recordkeeping. So that the recordkeeping again sets a standard.

I think the manual and the recordkeeping should set a standard. And the standard should be whatever is currently happening, but that it is documented, that the tire pressure was, in fact, checked and filled properly. But whatever form that takes that we're not dictating a new recordkeeping in the form of an invoice or something that the inspector can misunderstand -- where's your invoice -- when, in fact, they do something else that they don't call an invoice.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: Our intent is to have a box checked.

BOARD MEMBER BERG: That would be great. Thank you.

ACTING CHAIRPERSON RIORDAN: Sounds good. All right.

Let me now close the record on this agenda item, but it will be reopened when the 15-day notice of public availability is issued.

Written or oral comments received after this hearing date but before the 15-day notice is issued will not be accepted as part of the official record on this agenda item.

When the record is reopened for the 15-day comment period, the public may submit written comments on the proposed changes which will be considered and responded to in the final statement of reasons for the regulation.

This item, Board members, is an ex parte. Let me ask if there are any ex parte communications that need to be disclosed?

Very good.

We have the resolution in front of us. I don't know if there's any further discussion or if there is a motion. I would entertain a motion on the resolution that is number 09-25.

BOARD MEMBER LOVERIDGE: So moved.

BOARD MEMBER YEAGER: Second.

BOARD MEMBER BALMS: Second.

ACTING CHAIRPERSON RIORDAN: It's been moved and seconded.

Any further discussion?

Yes, Dr. Telles.

BOARD MEMBER TELLES: As I always say in these kind of regulations, if this was multiplied by the entire country, I'm sitting next to Mr. Two billion cars. And if it was multiplied by 2 billion cars, the impact of this would be much, much greater. If the entire world did this, it would be more in the range of 160 metric tons versus ones.

And I would encourage and even request that you send this also to the EPA. EPA is going to be coming up with guidelines and similar type thing and encourage them to do this throughout the United States, not just here in California.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Dr. Telles.

We know that other countries and the EPA are watching us now. And we are again in a position where we are providing leadership, not just for the country, but the world. And I'm sure Dr. Sperling would agree.

ACTING CHAIRPERSON RIORDAN: Thank you.

And I think, Dr. Telles, I see an affirmative there. So we will know that is going to be done.

Any further discussion?

Then let me entertain a vote.

All those in favor of the motion indicate by saying aye.

(Ayes.)

ACTING CHAIRPERSON RIORDAN: Opposed no?

The motion carries. We have adopted this item.

Now, as I mentioned a little bit earlier, my fellow Board members and I are going to go across the street behind the facility here to the Goodyear establishment at the corner of 11th and I for a brief demonstration of how this regulation will be applied in the real world. And we're going to be joined again by the Waste Management Board and the Rubber Manufacturers Association.

We will convene -- and I'm thinking about 10:35. If I look at this accurately, that gives us about 20 minutes, give or take five. And we will be back in the room. We'd like you to join us if you could.

And Mr. Kay, why don't we do the following. I know that we can use these back stairs for the Board members. The public can exit and go down the regular stairs and just exit the back of the building, not the front door, but the back of the door, and we'll all meet there.

Mr. Kay, why don't you come with us.

BOARD MEMBER LOVERIDGE: What time did you want to return?

ACTING CHAIRPERSON RIORDAN: I'm going to start this hearing about 10:35.

(Thereupon a recess was taken.)

ACTING CHAIRPERSON RIORDAN: Board members, I think we will go back into session and move on to our next item, which is Agenda Item 9-3-3.

I'm going to assume that staff is in place for this particular item. And my colleagues will join us just as soon as they are back from the tour of Goodyear.

We had a discussion not that long ago about State Implementation Plans for attaining federal ambient air quality standards. And the Board requested of staff a briefing on the federal planning requirements for ozone and particulate matter. And this is that briefing.

And, Mr. Goldstene, if you would introduce this item. And I want to thank the staff for, you know, helping to remind us what this is all about and why it's so important.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Madam Chair.

A number of State Implementation Plans, or SIPs, will be coming up for Board review and approval over the

next few years. So today, we wanted to brief you on what they are, what they contain, and the rules that govern them.

SIPs are comprehensive documents that contain all that we need to do to meet federal air quality standards from emission inventories, to plans, to regulations.

Today, we'll focus on the plan aspects of SIPs. These are the plans that demonstrate attainment of the federal standards by quantifying the emission reductions needed for attainment and then identifying the measures needed to get those reductions. And then, finally, making legal commitments to achieve those reductions.

In this process, of course, we work very closely with the U.S. EPA and our local air pollution control district partners to put together these plans and do the analysis.

I'll now ask Mr. Ravi Ramalingam, one of the Managers in the Planning and Technical Support Division, to provide an overview of the SIP requirements and the planning process.

(Thereupon an overhead presentation was Presented as follows.)

AIR POLLUTION SPECIALIST RAMALINGAM: Thank you, Mr. Goldstene and Board members.

Today, I will be giving you an overview of the

State Implementation Plan, or SIPs, required by the Clean Air Act, what they include, where our current SIP stands today, and next steps.

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AIR POLLUTION SPECIALIST RAMALINGAM: While today I will focus on attainment plans, which is typically what we mean when we say SIPs, California SIP includes much more.

First, it's data, especially emission inventory data, that California is required to provide periodically to U.S. EPA.

Second, SIPs comprise plans that show how an area will attain the air quality standards, demonstrate adequate process toward meeting the standards, verify that the states have the wherewithal to meet and attain the standards, and show that rules are sufficiently stringent. These plans are usually what we mean when we use the term "SIP."

And, lastly, the State SIP includes the rules adopted by the State and local districts and approved by U.S. EPA. These are the basic technology rules required by the federal Clean Air Act, plus all additional rules a State or district adopts to achieve the reductions needed for attainment of air quality standards. Once rules are approved by U.S. EPA, they become federally enforceable.

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AIR POLLUTION SPECIALIST RAMALINGAM: So what is an attainment plan?

An attainment plan is a road map for meeting the federal air quality standards by specific deadlines set in accordance with the Clean Air Act. The attainment plans are required by federal law and are due three years after U.S. EPA determines a region violates a federal standard.

This designation of nonattainment is followed by the process of classifying regions based on the severity of the air quality problem as measured by air quality monitors.

Under the Clean Air Act, different classifications carry different deadlines for meeting the standards in recognition of the practical need for more time in the areas with the greatest challenge.

Once U.S. EPA approves an attainment plan, the provisions become federally enforceable, and sanctions may apply if SIPs submittal deadlines are missed.

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AIR POLLUTION SPECIALIST RAMALINGAM: Key attainment plan elements are: The emission inventory, air quality modeling, adopted rules, proposed new measures, transportation conformity budgets, and legal commitments to achieve the necessary emission reductions.

The emissions inventory is the foundation for air quality modeling and developing new emission reductions strategies. An emission inventory is dynamic and changes all the time to reflect growth, introduction of new technologies, benefits of adopted regulations and other factors. The emissions inventory is a critical input to air quality models that simulate the atmospheric processes and predict future air quality.

The primary role of the air quality models is to determine what further emissions reductions will be needed to meet the standard by the applicable deadline.

To enhance the scientific foundation, air quality data analyses are also done as part of the weight of evidence approach outlined in U.S. EPA modeling guidelines. The core of an attainment plan is a demonstration that sufficient reductions will be achieved by the attainment deadline.

The emission reduction commitments made in an attainment plan are secured by an explicit legal commitment to achieve them by the federally mandated deadlines. Commitments for emission reductions made in an attainment plan are submitted to the Board for approval.

Attainment plans also include transportation conformity budgets. These budgets set limits for emissions from on-road vehicles and are established to

ensure that plan growth does not interfere with attainment of the air quality standards.

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AIR POLLUTION SPECIALIST RAMALINGAM: While attainment plans are the most comprehensive, the Clean Air Act requires submission of a number of other plans.

A progress plan is a demonstration that a region is making steady progress towards achievement of the air quality standards by the attainment deadline. While they are sometimes done as a stand-alone plan, the progress plan is typically done with an attainment plan.

A reasonably available control technology, or RACT, SIP is a demonstration that a federal benchmark of stringency for controls at major stationary sources is being met.

U.S. EPA has set national guidelines for the stringency of rules for a wide variety of stationary sources. As a practical matter, the major air districts in California have regulations that, for the most part, are most stringent and are required for RACT purposes.

The consequence of failure to submit a plan is a combination of non-discretionary sanctions for stationary sources and a loss of federal transportation funds.

In the large nonattainment areas, this could be in the billions of dollars. These sanctions would apply

18 months after U.S. EPA determines that a SIP has not been adopted and submitted to U.S. EPA.

Once the SIP is submitted and U.S. EPA approves it, it becomes federally enforceable. This means citizen suits can be brought over non-implementation of SIP measures. And as with non-submittal of the plan, U.S. EPA can also apply sanctions if a measure in a SIP has not been implemented.

In addition, at a later date, U.S. EPA would be required to adopt a federal implementation plan, or FIP, to remedy the control -- the continued failure to submit a plan or failure to implement a measure in an approved plan.

Non-submittal of a plan can also result in a transportation conformity laps or freeze, because plans set the budgets used for transportation conformity. Such a laps or freeze can delay or stop new transportation projects.

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AIR POLLUTION SPECIALIST RAMALINGAM: While the potential consequences of non-compliance with SIP requirements are dire, California has worked hard to meet Clean Air Act requirements and with rare exceptions has not faced federal sanctions.

California has submitted over 90 SIPs since the

1990 Clean Air Act amendments with no sanctions or federal implementation plan issues since 1994.

Conformity lapses have been minor. However, most importantly, the SIP process has helped drive California's remarkable air quality progress over the past three decades.

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AIR POLLUTION SPECIALIST RAMALINGAM: SIPs are complex. And with the necessary public process, it takes about two years to complete an attainment plan from start to finish. Work begins first on the emission inventory. ARB staff works jointly with the districts to develop and update the inventory.

Districts are primarily responsible for emission estimates for stationary facilities. ARB staff is responsible for emission estimates for mobile sources in categories such as consumer products.

While work on emission inventories is ongoing, as we do new research and find new data sources, inventory must be set for use in modeling and control measure development. The model is grid emissions both spatially and in time and then run a series of complex models that account for emission changes, meteorological data, atmospheric reactions, and ultimately predict pollution levels in the future.

The greatest challenge with modeling and the part that takes the most time is ensuring the models simulates approximately the levels of the pollutant as were measured at the same time in the same place and for the right reasons. Once these performance standards are met, the models are used to predict future air quality with projected reductions in emissions.

From the modeling output, we can tell whether an area is projected to attain the air quality standards on the basis of existing regulations by the attainment year. If the area is projected not to attain, we use the modeling to determine the additional emission reductions needed for attainment.

The task is then to identify new control measures to yield to the necessary emission reductions. Throughout this public process, districts and ARB staff hold a number of workshops to solicit input from stakeholders. Typically, workshops will feature inventory updates, modeling results, and control measure development.

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AIR POLLUTION SPECIALIST RAMALINGAM: Once adopted, local air districts attainment plan are submitted to ARB. Your Board determines if the plan satisfies the requirements of the Clean Air Act.

If the Board deems the plan to be in compliance

with the Clean Air Act, it approves the plan and directs staff to submit it to U.S. EPA. If a plan includes a proposed commitment for new State reductions, such as provided by the 2007 State strategy, the Board makes that decision.

Subsequently, the Board takes action on the implementing rules that will produce the emission reductions contained in the approved attainment plan.

Finally, ARB enforces the adopted ARB rules to ensure the expected emission reductions are achieved.

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AIR POLLUTION SPECIALIST RAMALINGAM: Local districts identify all locally adopted or proposed measures and with technical support from ARB staff assemble an attainment plan that incorporates the mobile source emission reduction strategy identified by ARB staff.

The extent of technical support by ARB staff depends on the available technical resources and needs of the local districts. For most districts, ARB staff performs all the necessary modeling needed. Often for smaller districts with limited resources, ARB staff also provides support in defining the emission inventory and progress components of plans.

Local transportation planning agencies are

responsible for providing the most updated vehicle activity data.

Finally, the local boards take action on the attainment demonstrations, which rely largely on State reductions.

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AIR POLLUTION SPECIALIST RAMALINGAM: As the previous slides outlined, attainment plans are built from the top -- built from the bottom up. State law assigns plan development to local air districts with ARB review and approval.

In the past, the local rules to reduce stationary source emissions played a much bigger role than they do today. Now, mobile sources under federal jurisdiction dominate the emissions in most nonattainment areas. This means ARB and U.S. EPA action are critical to the ability of local districts to develop attainment plans.

Because the plans are put together and adopted first at the local level, it is important that ARB and U.S. EPA develop their plan elements early in the process. In practice, ARB staff provides districts with an estimate of how the State will achieve new reductions. And these estimates are integrated into the attainment plans. However, the ARB commitment to secure these reductions is not made until your Board acts.

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AIR POLLUTION SPECIALIST RAMALINGAM: The current SIP cycle is focused on the standards U.S. EPA put in place in 1997. With your consideration of the Sacramento SIP today, the current cycle of SIPs will be nearly complete. The Board-approved 2007 State strategy provides the overwhelming majority of new emission reductions for these SIPs. The remaining effort on the current SIPs will be associated with interim updates to U.S. EPA on SIP implementation.

Staff will bring one of these updates to you next month to reflect the Board's regulatory actions of last year.

The April update is a technical revision requested by U.S. EPA staff to facilitate SIP approval.

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AIR POLLUTION SPECIALIST RAMALINGAM: The 2007 State strategy was adopted by the Board at the same time it approved the South Coast SIP in September 2007. It is the foundation of the current SIP cycle and provides most of the reductions needed for attainment of both the ozone and PM2.5 air quality standards in the South Coast, San Joaquin Valley, and elsewhere.

The 2007 State strategy targets major NOx sources, such as heavy-duty trucks, construction fleets,

passenger vehicles, ships, and locomotives. Most new measures are groundbreaking strategies to accelerate the clean up of old fleets.

The 2007 State strategy reduces NOx emissions by 50 percent in just eight years, from 2006 to 2014. And that's double the rate of any ten-year period before.

The majority of the new emission reductions in the 2007 SIPs came from the adopted truck rule. For the South Coast, the truck rule provided for 40 percent of the new NOx reductions and for the San Joaquin Valley provided for 85 percent of the new NOx reductions in 2014.

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AIR POLLUTION SPECIALIST RAMALINGAM: The ozone attainment plans for South Coast and San Joaquin Valley included emission reductions from long-term measures. The Clean Air Act allows this for areas classified as extreme. These are measures that anticipate future technology development.

As we approach the attainment deadlines for these two extreme areas, we're obligated to identify the technologies and further define these long-term measures.

As our new measures and existing rules are phased in, accruing emission reductions will result in cleaner air and progress towards attainment. Statewide emission reductions from ARB programs will continue to clean the

air in areas already meeting federal air quality standards.

This is critical, as studies are showing human health impacts from air pollution at lower and lower levels, which leads to tighter standards and the need for more reductions.

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AIR POLLUTION SPECIALIST RAMALINGAM: U.S. EPA recently set even more health protective standards for 8-hour ozone and PM2.5.

In 2006, U.S. EPA lowered the 24-hour fine particulate standard from 65 micrograms per cubic meter to 35 micrograms per cubic meter.

And in 2008, U.S. EPA set a new 8-hour ozone standard at 0.075 parts per million. The current 8-hour ozone standard is set 0.8 parts per million.

Implementation of the current SIP is the first step to meeting the new standards. Additional emission reductions will likely be necessary to demonstrate attainment of the new more stringent standards.

SIPs for the new standards will be due in 2012 and 2013. Most attainment deadlines will be in the 2020 to 2030 timeframe.

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AIR POLLUTION SPECIALIST RAMALINGAM: The new

more stringent 8-hour ozone standard resulted in the creation of several new nonattainment areas. Staff briefed you on this last month.

Nonattainment areas associated with the earlier 8-hour ozone standard are shaded yellow to the map.

New nonattainment areas associated with the new 8-hour ozone standard appear in striped yellow on the map.

The new nonattainment areas represent largely rural downwind areas. These areas will need our technical support and resources in developing their attainment plans.

The next steps ahead of us will require the continued adoption --

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AIR POLLUTION SPECIALIST RAMALINGAM: -- of new measures by the Board to implement the commitments of our 2007 State strategy and meet attainment deadlines in the 2014 to 2023 timeframe.

Also, staff will work to define long-term measures needed for ozone attainment in our two extreme areas, the South Coast and San Joaquin Valley.

The new air quality standards have attainment dates of 2018 for PM2.5 and up to 2029 for ozone.

The current SIP provides progress towards attainment of the new standards. However, new emission

reductions will need to be found in order to attain these new even more stringent standards.

And, finally, the implementation of AB 32 is expected to result in positive changes that will help us meet attainment goals as we become more efficient, develop new energy sources, and take actions that result in improved land-use and transportation patterns.

This concludes the staff presentation.

ACTING CHAIRPERSON RIORDAN: Thank you very much for a very clear and concise report. I appreciate that, and I know the other Board members do as well.

Board members, any questions?

Ms. D'Adamo.

BOARD MEMBER D'ADAMO: Well, I'd like to thank staff. I'm the one that asked for this report. And it was very helpful. Could you go to slide 15, please?

Okay. This kind of gets to the reason I asked for the report. It seems to me that we're in ongoing and never ending SIP cycles. Have we ever gotten to the point where we're close -- or a region is close to a deadline, namely not meeting a deadline, and we haven't seen that deadline get moved forward because of another round of health protective standards?

DEPUTY EXECUTIVE OFFICER TERRY: That's a great question.

(Laughter.)

DEPUTY EXECUTIVE OFFICER TERRY: And there's never a simple answer.

EPA uses the word transition to new standards. And there was litigation with respect to the 1-hour ozone standard and the 2010 deadline for extreme ozone areas. And I don't want to get legalistic here, but the 2010 deadline, per se, did not go away for the 1-hour standard. We're implementing the rules, and EPA in fact has just recently approved the 1-hour ozone SIP for the San Joaquin Valley and is working to do the same for the valley's 1-hour ozone SIP.

So the federal planning paradigm really is you continue to implement the SIPs for each standard with that particular deadline in mind. Meanwhile, on a parallel track, you're really moving ahead to develop new SIPs building on the old that go further that rely on new technologies, not in earlier SIPs, and look forward to the new types of growth patterns.

And then of course now, in the world we are dealing with with climate change, I thought one of the real values of this discussion today was to point out that from staff's perspective, we really need to be integrating our thinking from the very beginning, looking at the emission sources, the strategies, the future year forecast

with the vehicle fleets, the fuel mixes will be going forward.

So in a sense, it allows some positive thinking to happen to deal with these long-term measures in the ozone SIPs in I think a very positive fashion.

But so to answer your question, in part, the deadlines don't really go away. And, in fact, districts are required to adopt some fee rules for stationary sources in the event that they actually do not meet the 1-hour ozone standard.

And while there's very good progress towards them, those rules are likely to be implemented. And unless the Clean Air Act is changed, those rules will stay in place.

BOARD MEMBER D'ADAMO: So we could have -- each region could arguably have a PM10 -- two different PM 2.5 standards; 1-hour standard, 8-hour standard, and now transition to an additional -- there could be five different deadlines.

And with the issue of conformity and federal funds nonattainment in any of -- with respect to any of those deadlines could trigger a reduction in federal dollars.

DEPUTY EXECUTIVE OFFICER TERRY: Well, fortunately on the conformity side, EPA through their

conformity rules has been dealing with these transitions so that there's an attempt to deal with one conformity budget for ozone. So while the standard itself doesn't go away and the conformity rules, they are doing their best to not have multiple budgets.

But that is a whole other topic. And certainly we can get you all the information you'd like on that one.

BOARD MEMBER D'ADAMO: Then my last question is on our role with the new standards. We adopted -- when did we adopt the statewide SIP? 2007 I guess it was.

Are we going to adopt an updated SIP for these new standards after they come out?

DEPUTY EXECUTIVE OFFICER TERRY: Well, then that was the point of sort of talking about the two-year process. We are -- 2010, we'll be kicking off essentially the SIP development process for the 2012/2013 SIPs. One is for PM. One is for ozone. We want to work with the districts so that there's an integrated plan. South Coast has always done a nice job of integrating their pollutants into one air quality management plan. We certainly want to have a dialogue with the San Joaquin Valley District both from an efficiency resource standpoint as well as from a scientific standpoint.

And when we did the last round for the valley PM2.5 and ozone, the control strategy was integrated, but

they were separate plans.

So we're going to have that discussion with districts about integrated planning. And perhaps, ideally, we might move up the 2013 plan to 2012. But all those discussions remain to occur.

So perhaps in the 2011 timeframe, we would see a new State strategy being considered by this Board for the next round of SIPs.

ACTING CHAIRPERSON RIORDAN: Okay. Dr. Telles.

BOARD MEMBER TELLES: Yeah. I've read someplace -- maybe with the Pedia -- about the Clean Air Act and the mandated deadlines and as far as rate of progress. If I understand right, you have to have three percent reduction per year. And does that go for both ozone and PM?

DEPUTY EXECUTIVE OFFICER TERRY: Of course, it's never that simple.

No. They're different requirements for PM and ozone. And there are different requirements for progress until you attain. And then if you don't attain, there are additional requirements for rate of progress. So particulate matter is a little bit different creature.

Fundamentally, for ozone it's 3 percent VOC reductions per year. But there's also allowance that you can substitute NOx reductions, because when the Clean Air

Act was written from a federal perspective, there was not emphasis on NOx. But fortunately, once the science became clear that NOx reductions are really essential, there are provisions for doing that calculation that accommodate both VOC and NOx reductions.

BOARD MEMBER TELLES: In our truck rule, I notice that the reduction of NOx kind of goes down about 3 percent per year, but the PM goes down much more rapidly. Is that -- is there a reason for that based upon a SIP guideline?

DEPUTY EXECUTIVE OFFICER TERRY: Well, that's just the result of our regulations.

But the direct PM in the PM SIPs is -- for PM10 is a small component, because most of the PM10 is large fugitive dust. 2.5 direct diesel PM is important -- more important.

Of course, secondary formation is hugely important with particulate. So the same rules about showing progress do not apply to particulates. It's a little bit different.

BOARD MEMBER TELLES: Just two more questions.

Can -- I was told by an attorney once that you can't go any faster than the three percent.

(Laughter.)

BOARD MEMBER TELLES: Is that true? I mean, if

you had more --

ASSISTANT CHIEF COUNSEL JENNE: No.

DEPUTY EXECUTIVE OFFICER TERRY: No. We'll all --

BOARD MEMBER TELLES: Like a local district would be susceptible being to sued by some industry if you're going faster than the three percent --

DEPUTY EXECUTIVE OFFICER TERRY: Absolutely not.

ASSISTANT CHIEF COUNSEL JENNE: Well, there's a requirement in the Clean Air Act that says that the district has to -- that local nonattainment areas have to achieve progress as expeditiously as possible.

So one could interpret that as saying, well, if you could really do a whole lot better than three percent and you don't do it, you know, you could get theoretically sued saying you're not going as fast as you could expeditiously go.

But, realistically, districts are mostly going just about as fast as they could go. That has never really never come up in any legal case.

BOARD MEMBER TELLES: But on the converse, can a district be sued by going too fast by an industry that doesn't want to be --

DEPUTY EXECUTIVE OFFICER TERRY: Well, no. That's the whole point about expeditious attainment. So

the three percent in California for the two key areas, the South Coast and the valley, we clearly need more than three percent. So the Clean Air Act is very clear you must do better than the three percent. And you must show that the rate you're achieving those reductions is as expeditious as feasible.

BOARD MEMBER TELLES: Last question.

Is there going to be a federal SIP for CO2? Do you hear any word for that?

DEPUTY EXECUTIVE OFFICER TERRY: I can't answer that. Maybe our Chair can answer that, the one who's not here today.

ACTING CHAIRPERSON RIORDAN: Yes, please because -- yes, please.

EXECUTIVE OFFICER GOLDSTENE: There will be -- the U.S. EPA is working on their endangerment finding, which will start that process.

ACTING CHAIRPERSON RIORDAN: Okay.

ASSISTANT CHIEF COUNSEL JENNE: I just wanted to mention that in some of the court cases judges have been asked to decide Clean Air Act questions, they remark things like the Clean Air Act is more complicated than the tax code. So you're probably getting some sense of that here.

(Laughter.)

ACTING CHAIRPERSON RIORDAN: Dr. Balmes.

BOARD MEMBER BALMES: Well, as some of you probably are aware of this, but maybe the Board members are not, so the Clean Scientific Advisory Committee to U.S. EPA is considering a short-term NO2 standard -- air quality standard or advising the agency that they should have a short-term NO2 air quality standard. So we'll see what the administrator does about that recommendation. But I think it's likely that we'll have to deal with the short-term NO2 standard. Not just an annual one in the future.

ACTING CHAIRPERSON RIORDAN: Thank you.

Any other questions or comments for staff?

Ms. Berg.

BOARD MEMBER BERG: In looking at the modeling for our next round, are we going to be looking at the economic model? Because clearly, we've hit a time where the economic model is truly changed. And it will be interesting. And following the inventory to see if this downturn in the economy has, in fact, improved our emissions or if we're just using the same resources to do less business.

So how are we going to kind of reconciliate those two things we hear from industry that with such a significant downturn in business we should be seeing some

savings in emissions?

EXECUTIVE OFFICER GOLDSTENE: In the evaluation of the rules that we bring to you for consideration, we always do make an effort to try to consider the current economic situation and do our best to look forward to see what's happening in any particular industry that we might be regulating either for the first time or the going farther on existing rules. So we do do our best.

And we pay attention to it going forward, like we've been doing on the construction rule, off-road rule, for instance, to make sure we have an understanding of the impact of, in this case, the economic downturn we've been experiencing on that industry.

So we do do that as a matter of course. We try to present that to you in every rule that we bring to you for consideration.

I don't know if Lynn wants to add any more to that.

DEPUTY EXECUTIVE OFFICER TERRY: Well, that's a good description of the process for the rule-making.

But it was mentioned in the slide presentation, we're talking about 2020 and beyond. And so that's a very long time horizon for these new standards. And I think there's going to be a lot more interesting economic discussions going on in developing the forecasts, what we

think the future will be than there ever has been in the past.

And so that's one of the things that staff has already identified as critical. And again the link to the climate program, which is what economic scenarios would we assume. And when you look at how the economy rebounds over time, historically, you see it does rebound. And the question becomes then in what way and how is it different. And what sectors of the economy have become more and less important and what impact does that have on emissions.

So I think you will see more economic analysis sort of fundamentally in the early stages of SIP development so that when we're looking at our future year projections, at the very beginning modeling stages.

And just so you know, under State law, economic forecast underline the SIP in southern California is the responsibility of Southern California Association of Governments. So we have really worked hard in the last year, in particular, to have a three-way discussion with the South Coast Air District and SCAG and ourself as a technical team in preparation for the next SIPs. So some of these economic forecasts that they are responsible for regionally can be vetted in the public process sooner rather than later.

ACTING CHAIRPERSON RIORDAN: Dr. Sperling.

BOARD MEMBER SPERLING: From all your kind of off-hand references to climate here, am I getting the sense that the plan is to be integrating together all of the planning processes for both SB 375 and everything all the climate planning and, you know, measurements and activities into one activity that will be -- maybe it's not still called the SIP process, but it is essentially the same activity? Is that where we're headed?

DEPUTY EXECUTIVE OFFICER TERRY: Well, we can't really go there today, because that is not the way the Clean Air Act is framed. I mean, certainly it's possible by 2012 or 2013 there will be additional language in the Federal Clean Air Act that dictates that we haven't integrated a climate criteria pollutant program. That remains to be seen.

We're not, however, waiting for that to happen, because we're looking at it from, you know, a standpoint, a control strategies standpoint, and just trying to be smart about planning.

And, you know, fundamentally, for example, the way the SIP process conventionally worked is we assumed a vehicle fleet mix based on previous year's sales of different types of vehicles.

Now, we need to have a very up-front discussion about what assumptions should we make about the vehicle

fleet in 2020 and 2025 for SIP matters.

BOARD MEMBER SPERLING: That makes more sense. I asked it more as a process question than a legal question, because it's just what you were saying. It makes sense to be -- I mean, we want to be using the same assumptions and forecasting models. It would be crazy not to.

EXECUTIVE OFFICER GOLDSTENE: Well, we are -- as we're bringing these rules again to you for your consideration, we are, since the passage of AB 32, making sure that we evaluate using the best tools we have right now the co-benefits or disbenefits of any rule on another rule. And so we are paying attention to that. And we're trying to integrate everything altogether as we move forward.

An Lynn pointed out, you know, in the next few years, we don't know what changes will be coming from Washington that would also change our way of doing business in that direction, but it does make sense.

ACTING CHAIRPERSON RIORDAN: Thank you.

Board members, I think we'll move on, in recognition of the time. And we have no one wishing to speak on this item. It's not a regulatory item, so there's no need to close the record.

But let's move onto the Agenda Item 9-3-4. This is a consideration of the Sacramento region 8-hour ozone

attainment plan as a revision to the California SIP.

So as soon as we've discussed the SIP planning process, we're going to do some of that work right now.

And I will ask Mr. Goldstene to introduce this item.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Madam Chair.

This is the first year -- whoops. Wrong script.

(Laughter.)

EXECUTIVE OFFICER GOLDSTENE: We're talking about the Sacramento ozone.

ACTING CHAIRPERSON RIORDAN: That's right. I get confused, too.

EXECUTIVE OFFICER GOLDSTENE: I apologize. We were just discussing the order of things.

Staff's pleased to bring the Sacramento regional 8-hour ozone attainment plan to you for your consideration.

This is a plan that was developed in close cooperation with the Sacramento area experts, air district, et cetera. The plan shows how the Sacramento area will meet the federal 8-hour ozone standard.

The five air districts in the region in coordination with the Sacramento Area Council of Governments developed the plan for adoption at the local

level. Of course, ARB has the responsibility to determine whether a local air quality plan meets federal Clean Air Act requirements.

Staff's reviewed the plan and recommends Board approval.

The other proposed Board action is approval of a commitment to achieve further emission reductions for ozone attainment in the Sacramento region. This action is consistent with the Board's adopted 2007 State strategy that's already been submitted to EPA for approval.

I'll ask Ravi again from our Planning and Technical Support Division to present this item.

Ravi.

(Thereupon an overhead presentation was Presented as follows.)

AIR POLLUTION SPECIALIST RAMALINGAM: Thank you, Mr. Goldstene. Again, good morning, members of the Board.

In October of last year, we updated you on the development of the State Implementation Plan for the Sacramento 8-hour ozone nonattainment area.

Today, I am pleased to present the plan for your consideration.

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AIR POLLUTION SPECIALIST RAMALINGAM: The local plan element was developed by staff from the five air

districts in the nonattainment area and adopted by each of the district boards at noticed public hearings. The plan includes commitments from the local air districts to adopt new measures. But the bulk of the needed emission reductions will come from the State's mobile source program and from the ARB 2007 State strategy to attain the 8-hour ozone standard by the severe 15-area deadline of 2018.

The Board adopted the State strategy in 2007 to provide emission reductions for all of California's nonattainment areas. Staff had not calculated the benefits of this strategy in Sacramento at that time.

ARB staff has now calculated that the measures in the State strategy will reduce emissions in the Sacramento region by 13 tons per day of oxides of nitrogen, or NOx, and 11 tons per day of reactive organic gases, or ROG, in 2018.

We are proposing that the Board commit to achieve reductions in the Sacramento region in these amounts.

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AIR POLLUTION SPECIALIST RAMALINGAM: The federal nonattainment area includes all of Sacramento and Yolo Counties and portions of El Dorado, Placer, Solano, and Sutter Counties. The area covers five different air districts, each governed by its own board of directors.

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AIR POLLUTION SPECIALIST RAMALINGAM: This slide illustrates the progress the area has made in reducing ozone. The figure on the left shows the number of days over the standard averaged for the years 1997 to 1999 and the figure on the right averaged over 2003 to 2005.

Areas in green attain the standard.

Areas in yellow exceed the standard on average 10 or fewer times per year.

And the orange areas exceed the standard more than 10 times, but fewer than 20 times per year.

The area in red indicates areas with more than 20 exceedances per year.

You can see from these figures that over the six-year period the green and yellow areas have expanded and the red portion of the map has disappeared entirely. This means that more of the region meets the standard and the remaining areas that still violates the standard does so less often.

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AIR POLLUTION SPECIALIST RAMALINGAM: The region's made substantial progress in lowering ambient ozone concentrations, but there remains work yet to be done. The results of modeling done to support the 1994 federal ozone plan identified the area around the small

foothill community of Cool in El Dorado County as the high site for the region.

Subsequent installation of a monitoring in the community corroborated these results. Since then, the highest 8-hour ozone valleys tend to be recorded either at the monitor in Cool or the monitor in Folsom located on the eastern edge of Sacramento County.

Current ozone concentrations at these high sites need to be lowered by 17 percent to meet the standard.

U.S. EPA's initial classification of area as a serious nonattainment area gave the region until 2012 to attain the 8-hour ozone standard.

Recognizing that even with implementation of the stringent rules in our existing program, the region could not attain the standard by 2012, the five districts in the nonattainment area requested that U.S. EPA reclassify the area as a severe 15 nonattainment area. This classification gives the region until the 2018 ozone season to achieve the federal standard.

Achieving this level of reductions will be possible with reductions from new State and local measures. The results of the central California ozone study show that reductions of NOx provides significantly more ozone benefits than comparable reductions in ROG.

Consequently, while the attainment plan includes

both NOx and ROG reductions, it relies more heavily on NOx reductions.

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AIR POLLUTION SPECIALIST RAMALINGAM: More emission reductions are needed for the whole region to attain this standard. This slide shows how much.

As I mentioned before, the central California ozone study showed that NOx reductions are more helpful achieving attainment in Sacramento than ROG. So in the interest of brevity, I'm going to highlight only the emissions trends for NOx.

This chart shows the current NOx inventory and the forecasted inventory for 2018. Neither bar reflects the benefits of the 2007 State strategy. You can see from the bar on the left that Sacramento's emissions profile is dominated by mobile source emissions. In particular, as an important goods movement corridor, nearly one-third of their emissions come from heavy- and medium-duty trucks shown on the chart in blue.

Their next largest category shown in pale yellow is off-road equipment, including construction equipment, which is targeted by the construction rule adopted as part of the 2007 State strategy in July of 2007.

Following is passenger vehicles in purple, which includes cars, light-duty trucks, motorcycles, and school

and urban buses.

In green is boats, trains, and planes.

The orange band represents emissions from industrial sources, including commercial boilers and municipal utilities. These sources are under district jurisdiction.

Other emissions shown as a small aqua band at the bottom of the graph include other district sources like managed burning and residential fuel combustion.

The change between today's emissions and emissions in 2018 in this slide is mostly the result of mobile source controls.

2018 emissions are nearly 40 percent lower. But while existing rules will reduce emissions significantly, it is not enough.

Results of photochemical modeling studies conducted by ARB staff indicate that NOx emissions must be reduced an additional 12.5 percent in order to meet the standard in 2018.

The red line on the chart represents the resulting emission target. You can see that Sacramento emissions without additional measures would still exceed that value.

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AIR POLLUTION SPECIALIST RAMALINGAM:

Fortunately, the measures from the 2007 State strategy, together with local measures, will provide the needed reductions.

The lion's share of the NOx reductions, 9.5 tons per day out of the approximately 13 tons per day provided by new State measures, comes from the truck rule you adopted in December of last year. Successful implementation of the truck rule will be crucial to Sacramento's ability to attain the standard.

The construction equipment rule adopted in 2007 also provides substantial reductions.

Another important element is an improved smog check program. The evaporative emissions and visual smoke test portions are already in place. The other portions of the program either require legislative authority or regulatory action by the Bureau of Automotive Repair.

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AIR POLLUTION SPECIALIST RAMALINGAM: New and amended district rules and programs will provide an additional three tons per day reductions of NOx by 2018.

The local districts have committed to tighten emission standards for water heaters, boilers, asphalt burners, and internal combustion engines.

Indirect source rules and mobile source incentive programs further enhance their emissions reductions

programs.

While NOx reductions are the most critical for attaining the standards, reducing ROG emissions makes for a stronger control program. Important ROG reduction measures in the State strategy include new off-road emissions standards and tighter restrictions on consumer products. And the smog check program will provide ROG benefits as well.

Local measures, but significant ROG reductions, include stronger architectural coating and solvent rules.

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AIR POLLUTION SPECIALIST RAMALINGAM: This chart shows the remaining emission levels that the region must achieve by 2018 to attain the ozone standard.

For NOx, it is 91 tons per day. That is the level of the red line on the earlier emission chart.

The corresponding ROG level is 117 tons per day. In addition to providing the reductions necessary for attainment in the Sacramento region, emissions reductions from the control measures discussed provide air quality benefits to regions downwind of Sacramento that are affected by transport of ozone or ozone precursor emissions from the Sacramento area.

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AIR POLLUTION SPECIALIST RAMALINGAM: This chart

shows how the region will reach those levels just below.

Looking at NOx first, the controls in place before the Board adopted the 2007 State strategy will reduce emissions by 92 tons per day. Those are labeled base reductions. The measures in the 2007 State strategy, most already adopted, will provide another 13 tons per day of reductions.

The local air districts will provide three tons per day of reductions.

Total together, these will reduce 2018 emission levels to 88 tons per day, just below the attainment target.

Similarly, the base reductions plus the 2007 State strategy and local measures will bring 2018 ROG emissions down to 107 tons per day. Again, just below the target level.

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AIR POLLUTION SPECIALIST RAMALINGAM: Sacramento SIP contains several other elements required by the federal Clean Air Act.

Transportation control measures, designed to provide emissions reductions by reducing the vehicle miles traveled and improving traffic congestion, are included in the plan.

Commitments to develop these measures were

adopted by the Board of the Sacramento Area Council of Governments, or SACOG.

In order that ensure that measures and programs providing for emission reductions are implemented in an ongoing fashion, federal regulations require regions to show a three percent average reduction in emissions each year achieved at designated milestone years.

The plan includes a demonstration of reasonable further progress, which is meant in Sacramento using only reductions from regulations currently in place.

Transportation conformity budgets are also included in the plan. These budgets set limits for emissions from on-road motor vehicles.

In order to demonstrate that new transportation projects do not interfere with the region's air quality controls, transportation planning agencies must show that their transportation plans do not create conditions in which these emissions limits are exceeded.

Once the motor vehicle emissions budgets are found adequate by U.S. EPA, SACOG can use them in their transportation planning process.

Districts are required by U.S. EPA to demonstrate that they're requiring the use of reasonably available control technology, or RACT, on certain industrial processes that generate emissions. The RACT SIP is a

separate plan from the attainment plan and is not part of what you're considering today.

Each of the five districts in the region has previously resubmitted an ozone RACT SIP to U.S. EPA. Since U.S. EPA has recently promulgated new control technology guidelines, districts are in the process of updating their RACT SIPs to demonstrate compliance with new guidelines. The districts will need to have RACT SIPs in place before U.S. EPA can take action on the attainment plan.

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AIR POLLUTION SPECIALIST RAMALINGAM: Staff has reviewed the Sacramento regional 8-hour ozone SIP and finds that it meets all applicable federal requirements and is technically sound.

We therefore, recommend, that you adopt the plan and direct the Executive Officer to submit the plan to U.S. EPA.

We further recommend that you make a legal commitment to achieve the required reductions for attainment in the Sacramento region, which are 13 tons per day of NOx and 11 tons per day of ROG by 2018.

This concludes the staff presentation.

ACTING CHAIRPERSON RIORDAN: Thank you very much for your report. And let me turn it to the Board for any

questions.

Board members, do you have any questions for staff at this time?

We have three speakers: Bill Mueller, Brigette Tollstrup, and Jane Hagedorn.

If you would come forward, Bill, and Bridget to follow, and Jane to follow Brigette.

And I remind you of the three-minute rule.

MR. MUELLER: Good morning, Madam Chair, Board members. My name is Bill Mueller. I'm the Executive Director of the Cleaner Air Partnership. The partnership is a 20-year-old alliance between the Sacramento Metro Chamber of Commerce, Breathe California, Sacramento Immigrant Trails, and Valley Mission, the organization that I am part of.

We work together to advance policies that both clean up the air as well as promote economic development. And we serve as a forum for education, for policy development, and advocacy in the six-county Capitol region.

And I'm here on behalf of the business community and the public and environmental health community that we represent to urge your support of the Sacramento SIP. We believe that it has been constructed very thoughtfully over the last two years in partnership with the district,

with the Sacramento Area Council of Governments, and the five resident air districts in our air basin.

We think it's found a very good balance between reducing the incidents of ozone in significant ways, but doing so in a way that is not overly severe on its impacts on the economy.

And we have great concern about that and feel as though this plan has met that test.

So with that, we urge your support and thank you for the opportunity to speak.

ACTING CHAIRPERSON RIORDAN: Thank you for your testimony. Thank you for being here.

Let me indicate that Camille Kustin, you signed up, and you'll follow the third speaker. So we really have four speakers here.

Brigette.

MS. TOLLSTRUP: Okay. All right. My name is Brigette Tollstrup -- that helps. One more time. My name is Brigette Tollstrup. I'm the Division Manager responsible for air quality planning at the Sacramento Air District.

The Sacramento Air District began this plan development process in cooperation with the other air districts in the region and SACOG folks. Two years ago, we held a public workshop on the control measure elements

of the plan. We had input from a variety of stakeholders, including the Clean Air Partnership, SACOG's regional planning partnership, effected businesses, and many community organizations.

The plan was endorsed by SACOG as well as approved by all the air districts in the Sacramento region.

I want to highlight a couple of local plan elements that are included there. The staff mentioned the indirect source review rules. That will be a new commitment for some districts in this Sacramento region.

The plan also includes commitment that arises out of a partnership between the Sacramento Tree Foundation and local jurisdictions to encourage urban tree planning of air quality friendly tree species.

We want to acknowledge also the great leadership by your Board in achieving the significant amount of reductions that are necessary to attain the standards in the Sacramento region.

Approval of the plan today is particularly important, because the Sacramento region is currently in a transportation conformity lock down. Approval of the conformity budgets that are included in this plan by EPA will ultimately pave the way for qualification for federal transportation funds that arise out of the economic

stimulus package. And the transportation bill is expected to be passed later this year.

In conclusion, I just want to thank the many ARB staff that participated, provided information and guidance along the way, and would urge your Board's support for this plan.

ACTING CHAIRPERSON RIORDAN: Thank you very much.

Next speaker.

MS. HAGEDORN: Thank you for the opportunity to speak today in strong support of this SIP for our region.

I'm Jane Hagedorn, the Executive Director of Breathe California, and Sacramento Immigrant Trails.

And it is a pleasure always to speak and support good staff work and good policy decisions by our local elected officials and by yourself. In my 33 years, it is indeed a pleasure to be here.

We speak strongly to this, because we know as you do, the causal relationship between lung and heart disease and air pollution is very clear.

In fact, we have in our local association conducted now seven studies showing and identifying the following: The effects of air pollution on mortality rates from ischemic heart disease and stroke in the central valley, the relationship of particulate air pollution and rate of hospitalizations, the increased

hospitalizations and emergency room visits with use of medical asthma during high ozone days. And we finished up three studies on exposure to ultra-fine particulates at school sites close to arterials.

Health issues are serious, as you well know. The SIP as proposed will ensure that our region will reduce emissions at that required minimum rate of three percent a year and meet the new 8-hour ozone standards by 2018.

The result will be improved public health for all, and particularly for the tens of thousands of children suffering from asthma in our area.

Though we've made progress, we need these new controls. And we particularly support the movement now into indirect source review and in tree mitigation, something we've been working very hard on.

Thank you for this opportunity to testify. We look forward to continuing our work that's enabling us to make measurable progress in cleaning up our air.

Thank you.

ACTING CHAIRPERSON RIORDAN: Thank you. Thank you for your testimony.

And finally.

MS. KUSTIN: Good morning. I'm Camille Kustin with Environmental Defense Fund.

And we support and urge the Board's adoption of

the Sacramento SIP. The district's analysis of the feasible measures to include in the plan have been comprehensive and thorough. And the combination of measures the district has selected to include in the SIP are cost effective and will achieve the needed reductions in order for the region to meet its federal clean air requirements and also to protect public health in the near and long term.

And as Bill Mueller referenced, this was part of a group effort, a multi-stakeholder process with business, health, and environmental communities all involved. And so we thank you for your time.

And we also thank the Sacramento Air District staff for their hard work. And we with urge your adoption. Thank you.

ACTING CHAIRPERSON RIORDAN: Thank you very much.

That concludes those who have requested to speak on this item.

Let me indicate that we'll close the record on this, even though it's not a regulatory item. You don't close it officially, but I'd like to bring it back to the Board. As soon as Mr. Goldstene has made any final comments, and then, Board members, we can discuss it or ask questions, whatever we wish.

EXECUTIVE OFFICER GOLDSTENE: Staff is

recommending approval.

ACTING CHAIRPERSON RIORDAN: Okay. Board members, any questions or comments?

Dr. Telles.

BOARD MEMBER TELLES: It was mentioned that there will be improvement downwind. Is there any calculated amount of improvement in San Joaquin Valley from this Plan?

DEPUTY EXECUTIVE OFFICER TERRY: I'll start.

The primary downwind area is Nevada City. I thought we actually might see some of those folks here today. The predominant -- when you look at the map of transport within the State of California, everybody transports to everybody and it's a back and forth situation.

But the primary corridors of transport are through the Bay Area into Sacramento and then up north into the north part of the Sacramento valley and then eastward into the foothill areas. There's not a lot of recirculation into the valley.

ACTING CHAIRPERSON RIORDAN: Okay. Any other questions?

Well, then, Board Members, I would entertain a motion. There is a resolution.

BOARD MEMBER LOVERIDGE: So moved.

BOARD MEMBER YEAGER: Second.

ACTING CHAIRPERSON RIORDAN: It's been moved and seconded.

If you would indicate by saying aye if you approve. All those in favor of the approval of the resolution that's before us signify by saying aye.

(Ayes.)

ACTING CHAIRPERSON RIORDAN: Opposed no?

Motion is carried.

Thank the staff. And we'll make that addition to the SIP.

And congratulations, Sacramento. It's good that you've completed that step. Now you can just start working on the next revision to the SIP.

(Laughter.)

ACTING CHAIRPERSON RIORDAN: We'll take a minute while the changes of staff occur.

The next item is one that is important to a number of us on the Board, and that is -- it's an informational time. It's an update on the truck incentives.

This Board adopted in December of 2008 a landmark regulation known as the truck and bus rule. We recognize the need for financial assistance to help owners of small truck and bus fleets to comply with this rule.

We also emphasize to staff the importance of improving the ease of access to our incentive programs and to simplify the process among the multiple funding programs, because there are many. And hopefully if we can somehow make this easier for people to access, they will be more inclined to use it and in turn meet the rules that we promulgated back in December.

We will hear this progress report today from the staff about their efforts to align our truck incentives and to increase access.

A good example is the proposal to offer streamlined truck vouchers under the Carl Moyer program. A number of us who are on district boards administer these Carl Moyer programs. And I would tell you there is a broad diversity in how well those are administered time wise. I'm not saying they're not administered technically quite well. But in terms of timing, there is a significant difference between districts. And hopefully we can, you know, encourage all of them to be efficient.

The economic challenges that are facing the State of California and beyond are affecting the level and timing of the funds that are available for these incentive programs.

And so, I'd like the staff to begin.

I really appreciate the patience of our local

agencies partners and their willingness to work with the -- with us, as the funding has been delayed on occasion. Though, I'm thinking, Mr. Goldstene, as I'm sort of looking at you, they went out with some bonds just recently, rather successfully. And so my hope is in the next round where we hope to be, hopefully, that the State has, you know, equally good success as the first rounds of bonds.

So I'm going to let you introduce this item and tell us about our incentive programs.

EXECUTIVE OFFICER GOLDSTENE: Thank you, Madam Chair.

This item is designed to provide the Board with an update of our efforts on truck incentive programs.

As you noted, as part of the Board's consideration of the statewide truck rule and bus rule, the Board directed staff to work on ways to simplify access to funding across all of our truck incentive programs.

Staff and local agencies have made considerable progress in developing recommendations to simplify and align our truck incentive programs.

Most of these recommendations will be part of staff's formal proposals for public review and Board hearings to consider adoption of program guidelines at

future meetings.

We're also coming to you with a new element of the Carl Moyer program, the voucher element. We're ready to approve amendments to that program to those guidelines through an Executive Order to implement the vouchers.

Much of our incentive funding for cleaner trucks and buses comes from Prop 1B. We're continuing to seek the bond funds to implement our Proposition 1B programs for goods movement and school buses. And staff will bring you an update -- provide you an update on that process.

Now I'd like to introduce Michael Ginty of the Planning and Technical Support Division and Sam Gregor of the Mobile Source Control Division to be begin the staff presentation.

(Thereupon an overhead presentation was Presented as follows.)

MR. GREGOR: Thank you, Mr. Goldstene. Good morning. We'll be providing a progress report on the financial incentives available to upgrade trucks to cleaner models and support early compliance with the truck rules adopted by the Board.

At the December hearing on the heavy-duty truck rules, we described the incentive funding available to reduce diesel emissions ahead of or in excess of these regulations and the previously adopted drayage truck rule.

These funds come primarily through the established Carl Moyer program, the more recent Proposition 1B Goods Movement Emission Reduction Program, and the new AB 118 Air Quality Incentives Program.

These programs are administered by ARB generally in partnerships with local air districts and/or other agencies, such as the ports.

Many of these local agencies have additional funding sources, including federal grants, that can also be used to support cleaner trucks. Our update today focuses on the first three programs.

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MR. GREGOR: The Moyer and Prop 1B programs already offer grants to truck owners to retrofit or replace their vehicles. This year, we are proposing to expand the available incentives by adding quick turn-around vouchers for truck purchases as well as loan guarantees that improve a truck owner's ability to obtain financing.

Staff has been receiving public input on these additional options, the new AB 118 program, and the existing incentive programs throughout the previous year.

We will be asking for your support to move ahead with the Moyer vouchers today, but bringing formal proposals for the revised Prop 1B guidelines and the AB

118 guidelines to you for action later this spring.

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MR. GREGOR: When the Board adopted the statewide truck and bus rule, there was considerable discussion about the important role incentives play in helping achieve emission reductions from diesel trucks and buses in the State.

At that meeting, the Board directed staff to look at ways to align the program that we have available with the intent to simplify and improve access to funding for truck owners.

The Board also asked us to provide periodic updates on the funding available for cleaner trucks.

Also, you directed staff to implement a broad comprehensive outreach and assistance program to ensure that industry is aware of both the rule requirements and funding to aid early compliance.

Our report today will address the first two directives, beginning with the more detailed description of the new Moyer option for truck vouchers and will follow-up at the May Board meeting with the concepts for truck outreach and assistance programs.

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MR. GREGOR: We introduced the voucher incentive program to the Board at the December meeting as part of

the overall incentive portfolio. We'd like to give you an update on the progress of this program.

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MR. GREGOR: The goal of the program is help owner/operators and small fleets that own three or less heavy-duty trucks comply with the on-road regulations early. Port trucks are not eligible because of the earlier compliance dates and the drayage truck rule.

This statewide program offers up to $35,000 per truck to replace older high-polluting trucks with newer cleaner trucks quickly and with minimal administrative requirements.

This level of funding is slightly lower than the other incentive options based on the reduction in the requirements on the truck owner.

In addition, some truck owners will have the ability to use their voucher payment in combination with the finance package supported by our loan guaranty program that was also discussed with the Board in December.

The loan program, providing loan assistance for California equipment, or place program, provides nearly bankrupt truck owners the opportunity to get competitive financing for the purchase of a cleaner truck. ARB is currently finalizing agreements with the State Treasurer's office and outreaching the program to banks and

dealerships.

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MR. GREGOR: We developed the voucher program by streamlining the requirements of the current Carl Moyer Fleet Modernization Program, including the standardized forms and procedures to be used statewide.

Staff believes these changes will address concerns for Moyer applicants that the current process is hard to understand and takes a long time to complete. In some cases, at least 90 days.

We anticipate that this more user-friendly program will provide an opportunity for small fleets to complete the process in as few as five days.

To accomplish this streamlined approach, we need to relinquish some control. For example, staff has proposed to eliminate contract requirements for truck owners participating in the voucher incentive program. However, staff believes that the reporting and auditing provisions can ensure emission reductions are still achieved.

Voucher recipients will be monitored closely, especially over the first 90 days of the program. They will also be asked to report information on usage and ownership to districts for three years.

In addition, ARB staff will monitor ownership

through the DMV database and monitor truck maintenance through field visits.

Staff believes that the benefits of this faster, simplified option outweigh the risk of the reduced administrative requirements.

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MR. GREGOR: Staff has also conducted eight informational sessions and workshops with various stakeholders, including truck owners, dealerships, banks, and air districts to get the program to this point.

The voucher incentive program is nearly finalized and should be able to be approved by the Executive Officer shortly under the authority of Health and Safety Code Section 44287.

At that point, districts will begin soliciting and contracting with interested truck dealerships and dismantlers to ensure a robust foundation is put into place.

Staff has already made many of these initial contacts in order to guaranty a quick launch. Staff will also work closely with districts in training the dealerships and outreaching to truck owners to help ensure the program is implemented successfully.

There are roughly 27,000 eligible trucks and small fleets that could apply for these vouchers. The $15

million available in the first round of funding could provide vouchers to replace up to 500 eligible trucks on a first come, first serve basis with newer, cleaner models.

If the demand is high, we expect that air districts will allocate their Carl Moyer funding to the program to expand the number of vouchers.

Staff, districts, banks, and dealers will work together to outreach to potential applicants in an effort to begin expending funds for the voucher inventive program and the loan program by June.

Now I will turn to Mike Ginty of the Planning and Technical Support Division to discuss an alignment effort and the status of the incentive funding.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: Thank you, Sam.

I'd like to begin with the alignment effort.

Our goal: To simplify and increase access to financial incentives for truck owners with a special emphasis on smaller fleets.

To accomplish this, we sought to align the program requirements of the three incentive programs: Carl Moyer, Prop 1B goods movement, and AB 118 air quality incentives.

Alignment items included the projects eligible

for funding, the requirements to apply for program funds, and the level of funding offered for new or retrofit equipment at specific performance levels.

To make the selection and funding process faster and more efficient for the local agencies to administer, we also look for ways to streamline program implementation.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: Within ARB, a team of staff from all these programs work to align the different provisions among those programs. For each one, we examined why the provisions to achieve similar outcomes were different and whether those differences were necessary.

Our presumption was that we should recommend alignment of each provision, unless there was a compelling reason not to, such as the implementing statute.

We found many, many opportunities to make the programs consistent.

With these ideas for alignment, we invited our local agency partners to sit down and work through the concepts.

The local agencies were very supportive of the goals and improved on the initial ideas through their hands-on experience working with equipment owners.

I'll provide a few examples of the alignment concepts today. The detailed results will be included in the program guidelines being released for public comment and Board action later this spring.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: Board and staff advisories for the Moyer program.

To begin, we focused on the conditions that affect the eligibility of old trucks for incentive funds as well as the emission levels expected from new trucks.

For example, staff will recommend that all the programs use the combined weight rating for the truck and its load to determine the heavy trucks eligible for funding.

This combined weight rating is identified in the registration paperwork and may also be displayed on the cab of the truck.

Staff is proposing an eligibility requirement of 60,001 or greater combined weight rating. This represents a change from the current system used within the programs.

The photo here shows a truck with a weight rating of 80,000 pounds.

The Prop 1B and Moyer programs would both allow a truck owner to trade in two whole trucks for scrappage in

exchange for funding to help purchase a new truck.

This two-for-one approach enables the replacement project to be more cost effective and competitive.

Staff is also evaluating truck fleets in three size groups to assess eligibility for each pot of funds.

Fleets of one to three would be eligible for Moyer funded incentives, while fleets of one to 20 would be eligible for the loan guaranty programs.

Prop 1B funds would remain open to all fleets moving goods with a scoring bonus for fleets of 20 or less.

This concept will be detailed in the upcoming guidelines revisions for the Prop 1B program.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: We will also be recommending a standard level of grant funding for the same type of project.

For example, a truck owner replacing an old truck with a new truck meeting 2010 emissions standards would be eligible for a grant of up to $60,000 whether funded by Moyer or Prop 1B monies.

Both programs would add a new option of $20,000 for a combined NOx and PM retrofit device capable of bringing an existing truck to 2007 emission levels.

When these devices are verified and available,

they will provide a lower cost alternative to comply with the truck rules.

The back office requirements that guide how the local agencies administer the programs provide many additional opportunities for alignment. Consistency will help reduce the number of different requirements that local agency staff must master to implement the programs and that truckers must understand to be successful in obtaining funding.

These are just a preview of the provisions that staff believes can be readily made consistent between the truck incentive programs. The end result would be improved programs that are easier for the truck owner to access and easier for the local agencies to administer.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: To move forward with these improvements, there are several Board actions scheduled this spring.

Today, staff is looking for your support from Mr. Goldstene to finalize the truck voucher option under the Moyer program.

Next month, we will be coming back with the new AB 118 guidelines and spending plan, followed by the proposed revisions to the Prop 1B guidelines in May.

In May, you will also hear an update on

development of the outreach and assistance program for truckers. We tentatively plan to request proposals from local agencies for the next round of Prop 1B monies this summer with Board consideration of funding awards this fall.

Of course, those awards would be contingent on the availability of bond funds to implement the projects.

Let's look at the status of funding for truck incentive projects.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: The State incentives for cleaner trucks come from either fees that generate revenues and put money in the bank or they depend on the sale of bonds to raise funds.

We'll start with the incentive programs that are funded with revenues from routine actions, like vehicle registrations, tire purchases, and smog abatement fees.

Although these revenues can fluctuate from year to year, the funds are made directly available to ARB as they are generated.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: This slide highlights the funds from key revenue-based sources that we expect to be available over

the course of 2009.

The latest projections show that fees dedicated to the Moyer program will generate roughly $78 million. A portion of these funds will be available for truck projects, including the multi-district funds that ARB will leverage to dedicate $15 million to the voucher program.

The Legislature directed the first year of AB 118 funds to the new loan guaranty program for trucks.

Earlier this week, ARB staff release a proposed funding plan for the second year of AB 118 monies. This plan recommends $25 million for vouchers to subsidize purchases of hybrid trucks. The Board's action in the April meeting will determine the funds targeted to hybrids and other project types.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: The first three funding sources listed on this slide can provide more than $80 million specifically for cleaner trucks this year with local sources offering additional monies. The Prop 1B bond programs for both goods movement and school buses offer an even larger well of potential incentives.

But ARB's ability to access those funds depends on a separate process.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: For the State general obligation bond programs, like Proposition 1B, passage by the voters is just the first step.

Once the State budget gives an agency the authority to expend bond monies for a specific program, there's no actual cash available until the agency secures a loan from the State Pooled Money Investment Board. This investment board is composed of the State Treasurer, the State Controller, and the Governor's Finance Director.

They act on agency's loan requests, then determine both how and when to raise the cash to fund those requests.

The formerly routine process for loan approvals is now limited by the State's ability to access the bond markets under favorable conditions.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: So looking at ARB's Prop 1B programs, recent State budgets have authorized a total of $750 million in three installments for the Goods Movement Emission Reduction Program.

The Board awarded the first $250 million to local agencies in May of 2008 and will tentatively award the second and third installments later this year.

ARB's piece of Prop 1B also includes 193 million for the Lower Emissions School Bus Program. ARB awarded these funds to local air districts last year.

We requested a $515 million loan from the PMIB last fall cover the first year of expected expenditures under both of these Prop 1B programs.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: However, in December, before we could secure the loan, the PMIB froze the loan process in the face of the severe cash flow crisis and the State's inability to access the bond markets.

As directed by a Department of Finance budget letter to all departments, ARB instructed the local agencies to suspend entering into any new contracts or expending funds under the existing contracts for Prop 1B projects.

With the February budget action, the PMIB reconsidered the freeze last week. At that meeting, the PMIB continued to defer action on three pending requests for new loans, including ARB's request.

They did approve a 4-plus-billion-dollar bond sale underway this week, but the proceeds are dedicated to funding existing PMIB loans to other agencies.

The Investment Board members are planning a

special meeting in early April. Their stated intent is to reevaluate the State's cash flow and bond market situation to gauge the ability to sell additional bonds.

This would create a potential opening for the PMIB to approve at least partial funding for ARB's request. The treasurer reported earlier this week that the current bond sale is going well.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: The PMIB will continue to consider hundreds of bond requests for the State as a whole.

ARB has been and will continue to work within the administration to seek priority funding to cover monies disbursed before the bond freeze and to restart the Goods Movement and School Bus Programs.

Because of the funding delay and the continued uncertainty, we will need to modify the existing grant agreements with local agencies to extend the schedules.

Meanwhile, ARB can move forward to update the Prop 1B goods movement guidelines and make new funding awards for the additional $500 million authorized contingent on the availability of PMIB loans to provide the cash for implementation.

ARB staff is also pursuing another sources of funding for truck incentives, including federal monies.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: The federal government is offering multiple positive funding for air quality related projects at higher levels than ever before.

On this slide, we focus on U.S. EPA's Diesel Emission Reduction Program, which offers the greatest potential for funding to upgrade diesel trucks.

As part of the stimulus package, U.S. EPA has roughly $300 million nationwide for diesel projects. Seventy percent of these funds are open for nationwide competition, while 30 percent are directed to states.

This slide shows two of the competitive pots that could fund truck projects, as well as the $1.7 million available to ARB under the State element.

We have applied for the $1.7 million and are developing applications for the larger competitive pots as well.

In addition to the stimulus package, the annual appropriation under the Diesel Emission Reduction Act, includes $7.5 million each for the South Coast and San Joaquin Valley in recognition of their severe air pollution problems.

U.S. EPA Region 9 staff indicates that another five to $6 million will be available for California

projects.

Although this update focuses on trucks, we want to note that ARB is pursuing stimulus funding being administered by the Department of Energy and other agencies to support a myriad of Board priorities.

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PLANNING AND TECHNICAL SUPPORT ASSISTANT DIVISION CHIEF GINTY: In summary, staff will be continuing to move forward to align and simplify the truck incentive programs, including bringing specific proposals for AB 118 and Prop 1B program guidelines to the Board for your consideration.

The new truck voucher option under the Moyer program is a strong example of a streamlined innovative approach to offer truck owners more choices to suit their individual business needs.

Staff is currently working to launch the AB 118 loan guaranty program in June. And if the Board supports the AB 118 proposal in April, staff is prepared to begin rolling out the hybrid truck options in early summer with over $25 million.

At the same time, we will continue to seek State bond funds as they become available to restart the Prop 1B programs and keep you apprised of our funding situation.

Thank you. And this concludes staff's

presentation.

ACTING CHAIRPERSON RIORDAN: Thank you very much.

This is an important briefing I think for those of us who are very concerned about what financial help there will be for the owners of those trucks and buses that need to be cleaned up.

I have one question. Then I'm going to turn it over to the Board to ask their questions.

In the -- on slide 21 where you talk about the 156 million for diesel projects that's a competitive. Is that to be accessed only by like an agency like ours, or are there other agencies within the state? I recognize we're probably up against every other state in the nation. But besides the Air Resources Board, are there other agencies competing for that pot of money?

EXECUTIVE OFFICER GOLDSTENE: Mr. Kitowski.

ACTING CHAIRPERSON RIORDAN: Whichever.

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: In that particular source of funding, that is eligible for any State or local agency, air district, transportation agency. So, yes, there is fair amount of competition even among our allies in that particular one.

We will be orchestrating the State agencies so that we have a more comprehensive proposal from the State. But many cities and air districts will also be competing.

ACTING CHAIRPERSON RIORDAN: Thank you.

Board members, questions for staff on this?

Yes, Supervisor Yeager.

BOARD MEMBER YEAGER: Yes. Thank you.

And sort of two questions. One dealing with the application process and then also the involvement of the local air districts. It sounds like you were headed in the right direction here about streamlining the application process. And I just wanted to see if there was any more information or we needed to wait until next month that there might -- that you're heading towards maybe just sort of one general application that any firm or business can fill out and then they just check the right boxes as opposed to -- because we're talking about three different programs here, whether three different types of criteria, three different time lines, three different everything that I think would make it all be difficult. And I think the easier it is for people to understand and just submit something, particularly online, would make it a lot easier. And I just didn't know what we were looking at at this point.

PLANNING AND TECHNICAL SUPPORT DIVISION ASSISTANT CHIEF MARVIN: I think we appreciate the benefits of consolidating.

Cynthia Marvin.

We've been talking to the local agencies, the air districts, and the ports about this whole alignment process. We've reached a consensus on the proposal. That's some of what you saw today. We are still talking to them about the concept of consolidating to a single application that a truck owner could use to apply for any of these programs anywhere in the State. That's the obvious next step for to us go to, as well as looking at consistent solicitation periods across the state.

So if you decide that you want to apply for vouchers or a loan guaranty or you're eligible for a Prop 1B, that you can apply for all of those programs at the same time. So we'll be moving forward with those agencies to see if we can work out the details on that.

BOARD MEMBER YEAGER: Yeah, that's a great idea. It's never easy to achieve all that, given all the different criteria that's involved. But if that's where we could end up, that would be wonderful.

And then what do you see the involvement of the local air districts in these programs? Particularly their involvement in distributing some of the funds and whether these funds are going to be distributed throughout the state, or are they going to be earmarked for certain areas and how do those decisions get made?

EXECUTIVE OFFICER GOLDSTENE: The local air

districts are key players here.

But, again, I'll ask Cynthia or Jack to expand on that.

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: Yes. And they are our partners truly with every incentive program we have. Nearly every incentive program works through air districts or other local agencies. And we like that arrangement, quite honestly. It benefits both of us, because we developed the guidelines. We oversee, and we audit the program, but they have staff on the ground that can deal with the applicant much easier than we can on a statewide basis and adjust for local priorities.

There is a -- I think you may also have heard or be referencing the AB 118 program, which we are looking at that a little bit differently than the others. The AB 118 program, which will be coming to your Board -- this Board for approval next month, is a -- it is a lot -- is significantly broader and has more flexibility. And so we may be doing grants through that. We may be doing vouchers, loans, a variety of different programs through AB 118.

And so rather than have a set rule that all the funding is distributed to the districts, each program's analyzed separately. So we will have some programs that

we're proposing go through local agencies. And we'll have others that we may -- workforce training or certain voucher programs that may -- you know, we're proposing don't go through local agencies.

We are working with them. The local agencies have indicated they want to -- they want to be tied in tighter, and they want an opportunity to play in most of the funding sources that we have.

And what we're balancing and what we're still working through is we don't -- where it makes sense to work through local agency and where there's benefit both for us and for the end consumer, that's where we want to incorporate them. But if we're just adding another layer of government into the process just for the sake of dealing in the local agencies, then if there's a streamlined way to do that, then we're probably proposing something different.

BOARD MEMBER YEAGER: And this point, I know that there are a variety and different kind of programs and grants that going to be available.

But at this point, are we looking at all of the air districts are going to be able to participate in those programs? Or are some of them going to be earmarked for certain areas of the State and not for others?

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF

KITOWSKI: I'm running through the different lists in my head as you're saying that.

The biggest portion of the funding -- I'll put that out that there -- you'll see next month -- is for heavy-duty hybrids. And the heavy-duty hybrid program is one where it is getting about 50 percent of the funding. And the districts -- our proposal does not have the districts running that program. That's the one they're most interested in becoming a part of.

And kind of referencing my last comment, that's one where we said it looks a lot more streamlined if we deal centrally for the State and the districts understood our concerns and we sort of tasked them with go back and figure out a way where it's beneficial to the State and to the end user to run through the districts. And they are working on that.

Each of the categories that we are proposing is run a little different. And some will only be for extreme attainment areas, but most of these are statewide programs.

PLANNING AND TECHNICAL SUPPORT DIVISION ASSISTANT CHIEF MARVIN: Just want to note that Jack's addressed the new AB 118 Program. Prop 1B by statute is focused on four major trade corridors and by statute is implemented through local agencies, air districts, and sea ports, and

others.

BOARD MEMBER YEAGER: Thank you.

ACTING CHAIRPERSON RIORDAN: Dr. Balmes.

BOARD MEMBER BALMES: So, this is all pretty complicated to me. I assume it's complicated to the truckers as well.

And going back to our hearing -- was that in December -- where we heard a lot of testimony from small logging trucker outfits, I appreciate the work that staff's done to try to streamline the program and to try to help truckers that in the past had difficulty getting extra help in trying to improve their truck fleets or small truck fleets.

But so to be just specific about it. If I was a small logger -- logging truck operation up in Humboldt County or Mendocino County now, what actually am I likely to be able to get at this point? Because the voucher program from -- which is Carl Moyer funds, is only 15 million for a whole state, 500 trucks. Doesn't seem like that's probably going to go very far. I realize we're in fiscal -- dire fiscal crisis, but I don't know. Seems like there's a mismatch here between -- and I realize there may be limitations. But just to air it, it seems like a mismatch between what's needed to help trucking outfits that may be going out of business, unless we give

them some help.

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: Cynthia and I were looking at each other. Okay, who answers this one because we really --

BOARD MEMBER BALMES: Sorry. I felt somebody has to ask this question.

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: We are absolutely coming to you jointly, so I'm not trying to step on your toes. She's not trying to step on mine.

She looked and said she's limited. And by that she means the goods movement is definitely limited. And so the Proposition 1B funds would not help a Humboldt County person.

In this particular program, let me just say Humboldt County, small. Not a lot of opportunities right now. They are just basically not large enough to run a significant Carl Moyer program.

The voucher program, although it's limited in size right now, will provide them opportunities they don't have today.

I think we were up front with the Board in December. We don't have enough money to help all of the businesses. We wish we had more. You know, it will be less than 10 percent of the businesses that will be able

to help out there.

But yet where we can help we think we can make a significant difference. So this is a step in the right direction.

Down the road, what this voucher program will do is it will become a core part of the Carl Moyer program. So we're starting it. We're kicking it off with seed money, 15 million. But now, any Carl Moyer funds and any AB 923 funds that local districts have can be used in this program.

BOARD MEMBER BALMES: I appreciate that answer. I thought that was going to be the answer, but I think it's good to air it.

ACTING CHAIRPERSON RIORDAN: Ms. Berg.

BOARD MEMBER BERG: I would just really like to thank staff through the Advisory Committee, which is another committee that we do have for both the districts, the stakeholders, and -- or the environmental and health groups as well as the end users of the funds. A lot of ideas have been brought forth, and staff has taken all of these ideas and done a tremendous job.

And I really want to thank you for your Herculean effort, because it's really a job well done. I feel like we have made a large step forward. And by the time we bring it back to the Board, we will have had another

Advisory Committee meeting and further be able to refine some of these remaining issues.

ACTING CHAIRPERSON RIORDAN: Mayor Loveridge.

BOARD MEMBER LOVERIDGE: One question, which I guess really is not fair, but it's -- you hear all these incentives and they all seem good. But it's the same question where somehow it's distant from the streets or from numbers of trucks.

I moderated a panel discussion in Long Beach on Tuesday which was talking about the drainage trucks at the two southern California ports. And listened to numbers of the 20,000 trucks and the requirement to have an alternative fuel and have all the trucks meet standards of 2007. And listened to different trucking companies and where they received secured funding.

And one was listening to all that, and it was different from talking about incentives. They were talking about what seems to me this no longer was a proposal or strategy. You saw plans working. And it was I thought -- I don't know -- good to see these ideas and incentives actually translating into the 20,000 or so trucks, which are most damaging to the air quality both in the immediate vicinity and to all of us in the South Coast basin.

So I guess numbers and instances will come, but

at least from the listening to the trucks that are going to go in and out of the two southern California ports, significant -- I mean really significant steps are being taken.

Two questions.

One, I think it's the American Recovery Act is the largest stimulus in the history of mankind. What I mean, it's system of 101 or 1,001 different huge legislation. But are we -- I guess that was part of the question. Are we competing for -- it's not simply raising your hand. There's going to be many more losers than winners in this business. And it has to be done very effectively.

EXECUTIVE OFFICER GOLDSTENE: We are doing what we can to get as much money for California as we can from all the different pots of money.

We're working very closely with the Bryant Turner in our Washington, D.C., office and the Governor's office in Washington. Chair Nichols has been to Washington recently. I'll be going soon to help lobby for our share of funds. CalEPA is also helping us with this as well as the local air districts. So, in fact, I know Barry Wallerstein from the South Coast Air District is in Washington today.

BOARD MEMBER LOVERIDGE: Some of this is by old

tracks. But some of it is going to be competitive. And, again the last -- I just join -- Dan Sperling and I -- they have announced the Energy Block Grant Funds. I noticed at least our city by formula was going to receive $2 1/2 million for an Energy Block Grant Fund. And there is some considerable kind of discretion of how that money is to be spent. As a Board, are we providing some guidance that might help in reducing greenhouse gas? As one makes choices each year of the Energy Block Grant, that greenhouse gases are choices to encourage that.

EXECUTIVE OFFICER GOLDSTENE: It's an excellent question, and we're working very closely with the California Energy Commission to help them understand all of the opportunities that those monies could be used for, particularly as they relate to greenhouse gas efficiencies in the housing and transportation area.

BOARD MEMBER LOVERIDGE: Well, cities -- again, our city is not competing for it, but we're receiving this.

EXECUTIVE OFFICER GOLDSTENE: But the guidelines -- they're going to have set out some rules.

BOARD MEMBER LOVERIDGE: Well, I'd encourage you to work again closely with SCAN and the League and CSAC, because this is real money with real projects that can make real differences, not only energy conservation, but

in terms of greenhouse gases.

EXECUTIVE OFFICER GOLDSTENE: Agreed. We will.

ACTING CHAIRPERSON RIORDAN: Yes.

BOARD MEMBER TELLES: A few questions. Then I have a case study for you.

One of the questions is on the voucher program was mentioned, if I heard the number right, that there's 27,000 trucks available for that. Is that right?

Is there a restriction requirement on the number of trucks that -- if it's trucks less than three in a fleet, I recall from the truck rule that that's more in the range of 200- to 300,000 trucks. And there's only 27,000 trucks available -- eligible. Why is there a big discrepancy?

MR. GREGOR: The difference in figures has to do with the number of eligible trucks that are in the high or the heavy-duty weight range and that are in small fleets operating within California.

BOARD MEMBER TELLES: So there's a weight range requirement on that?

MR. GREGOR: Yes, there is.

Currently, we are looking at replacing the heavy-heavy-duty diesel vehicles. And then we are also looking to expand that to medium-heavy diesel vehicles, which will open up the number of vehicles that could

qualify for vouchers.

BOARD MEMBER TELLES: Then also you mentioned on the 60,001 gross weight, is that an increase or decrease in general as far as your requirement?

MR. GREGOR: It depends on how you look at it. In general, it's an increase for allowing trucks that operate at a high payload. And I guess the terminology used between gross vehicle weight rating and the 60,000 pound mark that we have listed allows a greater number of trucks to be able to participate right now.

BOARD MEMBER TELLES: All right. I have to just see how good this is going to work. I'm going -- this is a case study.

Actually, this letter was handed to me in my office yesterday by my transcriptionist.

And her husband has a truck and a backhoe. And it says,

"Dear Dr. Telles,

"I know that are you on the Air Resources Board, and I would like I would like to talk to you about the situation of the new regulations that are going to be in effect regarding heavy-duty diesel trucks.

"The new laws are going to basically put my husband out of business. He is an owner/operator

of a backhoe (custom trenching) and hauls his backhoe on a custom built 1988 freightliner with a 1974 Cummins big rig Cam 350 motor.

"We have one truck and one backhoe. Because he does not haul goods (he is not eligible for any State program to reduce emissions) and therefore his way of earning a living is going to come to an abrupt end.

"His income and this economy and his age do not make it possible for him to purchase a new diesel truck and a new compliant backhoe loader."

What do you do for a guy like this?

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: This -- I was nervous when you said you had a case study. I thought this was an oral exam for my Ph.D program. But I think I can handle this one.

(Laughter.)

BOARD MEMBER TELLES: Does he have any funding available any place?

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: Yes. There is funding available. And -- but let me start with the regulation first of all, because the regulations we set up generally we bring to the Board. And certainly the one the Board adopted -- or two the Board adopted have concessions for the small

owner/operator. So the implementation dates, the time at which they have to do something, is pushed off. It is later.

And that's important, because technology gets more of a chance to get out there. In this case, especially for the old truck that they have, waiting a couple of years to purchase a truck is a significant cost impact. I mean, they will pay significantly less by being able to buy a five- or six-year-old truck than they will having to buy a brand-new truck or a truck that's only one or two years old.

So they can -- they can wait until -- for the on-road rule, they can wait until 2014 before they have to take any action in that particular rule.

And they're required at most to have a 2004 truck with a filter. So it will open up a lot of opportunities for them there.

If they go sooner -- but if they wait, the funding opportunities will be limited. So there is a balance.

If they move more quickly, they do have funding opportunities. Both the voucher and the Carl Moyer program are applicable in this particular case and could be used.

So it's -- it is a little bit of they can move

now and have the best chance of getting the most money, but they will pay more for their project. They can wait and have their project cost less, but then they risk not being able to get as much money.

BOARD MEMBER TELLES: He put a catch 22 into this too, in that currently, you know, he's burning through his capital just to survive. So by the time the extended time for the truck rule to come into effect for small fleets comes along, there won't be any -- he won't have any capital to contribute to buying a new truck. He's just kind of living on that.

Now, the other issue, too, is that he often contracts with county governments. And, currently, he was told by a county government if his trucks are not in compliance, they're not going to hire him. And so he has no way of making an income in the meantime. That's going on in a lot of -- in a lot of areas now. So how do you deal with that?

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: Well, I would have to see the specific requirements that the county government put in place. But he is in compliance.

BOARD MEMBER TELLES: The specific requirements were they wanted the number on his motor and to check with the State agency to see if he's in compliance.

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: He is in compliance until 2014 without doing anything.

I did -- I will mention two more things, because I have a great partnership here. I had two people whispering in my ear.

One, we would be happy to work with this person personally. But the San Joaquin District is also the one who has -- in addition to funding we distribute, has additional sources of funding. And they would be probably in the best position to guide this person through.

The other point is we also do have -- are implementing as we mentioned today a loan program. So if he's having trouble, if he's nearly bankable, if he's a little concerned because of the current economic situation, he can use our voucher program to have the down payment. And he can use the loan program to bridge the gap. And we do have a package for him that can help them get into compliance early.

BOARD MEMBER TELLES: I hate to spend so much time here.

But the backhoe, too, is an issue. The backhoe, he normally buys a backhoe every three years. And so he would probably be in compliance. But, unfortunately, with the downturn in the economy, he can't buy a backhoe at his

anticipated time. So he has -- he's double whammed here by the off road, and he's also by the on-road rule. And his economics are not going to work.

I think he may fit into the not barely bankable but the unbankable. And where do those people go?

MOBILE SOURCE CONTROL DIVISION BRANCH CHIEF KITOWSKI: Unfortunately, there are people we can't help with our voucher program, with our loan program. We've tried to design the best program we can to be sustainable, to provide the most benefit for both the impacted industry and the breathers of California, recognizing there are taxpayer dollars at work here. And that doesn't mean everybody has a solution.

But I think we have a fairly good package for this person. We'd be happy to walk them through what we have.

EXECUTIVE OFFICER GOLDSTENE: The whole package combined could make them eligible, but we'll have to look -- we'd be happy to look into that as well as the district -- the air district could do that too.

BOARD MEMBER BERG: But the other thing I'd like to offer, Dr. Telles, is the fact that they have one of each. And that does buy them time. And so there isn't a need to have to move in 2009.

I mean, from a business owner's perspective, it

would be -- I'm happy to look at it as well and work with staff on -- but I would look at it what is the sense of urgency to move in 2009 and let kind of this economy see where we're going to kind of hit a plateau. And things could be in a different situation in 2011, for example, for both them and their business. And they have until 2014. And on the off-road rule, they have that much time as well.

So with one and one piece of equipment, I think what would be helpful to them to hear, from staff -- and I'm also happy to help -- is that this isn't something that's going to put them out of business tomorrow. And we can take a look at it and develop a plan so they don't feel they're going to be out of business either by 2014. That would be my recommendation.

BOARD MEMBER TELLES: I think this points out there's a lot of confusion. And there's a lot of confusion in the people out there when these rules take effect and all that.

And as Dr. Balmes mentioned, there needs to be a more simplified system. I got on the website the last few days just to try to figure out, you know, if I were a trucker how would I qualify for a loan. It's very complex either at the State or the local level. And it would be nice for folks like this to just kind of send their

information to the District, and then it just kind of pops out if they qualify for something or not. And not for them to be the experts on trying to figure out if they're Carl Moyer or 112 or whatever. And is that the way we're going?

EXECUTIVE OFFICER GOLDSTENE: That's what we're trying to do.

PLANNING AND TECHNICAL SUPPORT DIVISION ASSISTANT CHIEF MARVIN: That's definitely the direction we're going. In the presentation, we talked about three follow-up items that you asked staff to work on.

The final one is the truck outreach and assistance program. And that's something that's underway right now so that all of the complexity of the statutes and the requirements of these programs is screened. And what someone is presented with who has a truck is here are your different kinds of funding choices. A very simple approach, a very simple decision tree about what you might be eligible for. We're trying to make sure that everybody who implements the program, whether it's here at ARB, at local districts, at truck dealerships, at financing institutions has the same comprehensive information about all of those choices and kind of a single portal to go through. And we'll be reporting back to you on that effort in May.

ACTING CHAIRPERSON RIORDAN: And I thank you for that, because there is a tremendous difference between that that we've just heard about. And I think of the dump trucks even more so than the loggers.

But these people just don't have the resources and the knowledge to do some of the things that the big companies clearly do. There is such a difference between a major company of -- that has fleets of trucks or fleets of off-road equipment versus a single ownership. It's just like day and night.

So I'm glad you're recognizing that. And we'll do everything we can to encourage you to keep recognizing that. And I do thank you.

And if it's all right with the Board, I'm going to move forward, because we do want to sort of complete our schedule today.

And I thank you. This is an informational item, and we do not need any further action. And just encourage you to move forward in as much as you can to help others.

I know we have our legislative update -- I'm going to look at the court reporter. How are you doing?

My idea is just to move right along.

We have an overview from our legislative office on activities and priorities for the year. So if you would come forward please, Rob.

And, Mr. Goldstene, do you want to introduce this item?

EXECUTIVE OFFICER GOLDSTENE: Thank you, Madam Chair.

ACTING CHAIRPERSON RIORDAN: You've got to get your slides together there.

EXECUTIVE OFFICER GOLDSTENE: This is the first of a two-year legislative session. And the Legislative Affairs Office is here today, Rob Oglesby, to give you an update on the work that's been going on in the Legislature since they reconvened recently to give you a sense of going forward with what kind of legislation we've been seeing introduced.

In the last few weeks, we have been called to many hearings on the low-carbon fuel standard, AB 32 overview, transportation, and other things. So we've been busy over in the Legislature just on special hearings.

And Rob will let you know also about several bills that we're tracking as well. So Rob.

(Thereupon an overhead presentation was Presented as follows.)

LEGISLATIVE DIRECTOR OGLESBY: Thank you, Mr. Goldstene, Chair Riordan, members. Good to see you. It's nice to have this chance to visit with you today and provide an update or an overview of our very early in the

stage legislative session.

And even though it's early in the session, a lot's happened. There's been changes in leadership, new committees, and a new budget.

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LEGISLATIVE DIRECTOR OGLESBY: Today, I'll cover the new bills that were linked to the budget and that impact ARB's programs. Then we'll review some of the legislative changes and recent actions in our area, and close with a very preliminary review of the big ticket issues in air quality and climate change.

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LEGISLATIVE DIRECTOR OGLESBY: First, the budget. The long struggle to address the State's serious fiscal situation finally yielded an agreement that was hoped to close the gap between revenues and expenditures.

And, yet, with recent shortfall projections, it looks like the just enacted budget will need to be revisited even before the ink is dry.

Today, I want to review two bills that have accompanied the budget as trailer bills.

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LEGISLATIVE DIRECTOR OGLESBY: AB 8 by Assembly Member Nestande, which impacts ARB's off-road construction equipment rule and specific road projects, and SB 3 by

Senator Florez, which modifies the Carl Moyer program for agriculture projects.

Note the X2 in the bill number denotes these bills were considered in the Legislature's second extraordinary session.

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LEGISLATIVE DIRECTOR OGLESBY: AB 8 directs ARB to revise the off-road construction equipment regulation in two ways.

First, the bill allows the retirement or significantly reduced use of construction equipment between March 1, 2006, and March 1, 2010, to count as credit against the 2010 and 2011 replacement and retrofit requirements.

ARB staff believes that there will be enough credits available to industry to offset the replacement and retrofit obligations for two years. This amounts to a delay in the start-up regulation.

Second, the bill alters the requirement that the construction industry meet retrofit/replacement benchmarks on an annual basis and instead bumps this to a triennial schedule. This essentially allows the construction industry the flexibility to average their replacement and retrofit investments over a three-year period as long as they hit the target at the three-year interval.

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LEGISLATIVE DIRECTOR OGLESBY: AB 8 also set 13 shovel ready road projects by providing deadlines for -- by accelerating deadlines for actions on permits and convening an ad hoc committee to work through permit snags and delays for these projects.

The bill also relieves these projects from any obligation to mitigate greenhouse gas emissions under CEQA.

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LEGISLATIVE DIRECTOR OGLESBY: Senator Florez introduced a bill intended to give agriculture a leg up in the Carl Moyer program.

The bill directs ARB to assign a project life of at least ten years for Carl Moyer off-road farm equipment.

In addition, it allows projects to be funded regardless of the time period between the application for funding and the compliance date of any local, State, or federal rule, as long as the project is not funded after the compliance date.

Currently, the Carl Moyer program requires an eligible project to have a minimum life of three years. The life of the funded project is calculated based on the time from when a project is funded until the time emission controls for a project would otherwise be required by the

regulation.

The time period is intended to ensure projects result in surplus emission reductions and encourage early compliance.

The bill's assignment of a ten-year life span to farm equipment is intended to improve the cost effectiveness calculations for farm equipment and allows those projects to complete more favorably with non-farm applicants for Carl Moyer funds.

The bill also allows farm equipment to receive Carl Moyer funds at any time prior to the mandatory compliance date. Many farm equipment projects will not meet the current three-year requirement, because regulations will require emission controls in less than three years.

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LEGISLATIVE DIRECTOR OGLESBY: Now I'd like to review some highlights of the new session.

One highlight, of course, is the Senate's confirmation of Dr. Telles. Last week, the full Senate voted confirm Dr. Telles to both the ARB and San Joaquin Governing Boards. So congratulations, Dr. Telles.

And without going into too much detail, I think the importance the legislative leadership places on air quality and the environment is demonstrated by the

creation of several new select committees.

In addition, the new committees on ports and renewable energy, a new select committee on climate change and AB 32 implementation was created in the Senate. That Committee is chaired by none other than AB 32 author Senator Fran Pavley.

That committee plans several hearings throughout the year on AB 32 implementation climate change issues.

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LEGISLATIVE DIRECTOR OGLESBY: And as Mr. Goldstene stated, the Legislature has been busy, very busy. Even with that action on bills, there have been many, many special hearings on air quality and climate change issues.

The nine you see listed here are only the hearings that took place in February and March. And I'd have to add an additional tenth one that was conducted yesterday on the federal stimulus package that we testified at.

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LEGISLATIVE DIRECTOR OGLESBY: The legislative session is at the point where new bills have just been introduced. In spite of the recent activity focused on the budget and special sessions, bill introductions are at typical levels with over 2,000 new bills in the hopper.

Committees have yet to begin hearings in earnest, so there has been no sifting of wheat from the chaff. Nevertheless, there are about 200 bills affecting air quality and climate change.

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LEGISLATIVE DIRECTOR OGLESBY: Thus far, the Legislature's interest in our air quality subject area includes priorities like the economy, climate change, the low-carbon fuel standard, enhanced vapor recovery, and federal stimulus dollars.

I can't cover the 200 bills here, but I'll try at least to identify some significant issues and bills.

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LEGISLATIVE DIRECTOR OGLESBY: Clearly, the severe economic recession is at the forefront of public concern and is the dominant issue before the Legislature.

As you know, concern about the economy reaches into actions taken to protect the environment. Economic analysis, particularly in connection with the implementation of AB 32, continues to receive a great deal of attention in the Legislature.

You heard firsthand the legislative analyst's critique of the Scoping Plan's economic analysis. And that still receives legislative intention. Economic impacts, particularly near-term economic impacts, are

constant topics in the Legislature.

The opportunity to link environmental policy with employment, also known as green jobs, is a common theme.

And, finally, the Legislature has been very eager to ensure that California maximizes federal economic stimulus opportunities and can move the funds into the economy as quickly as possible.

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LEGISLATIVE DIRECTOR OGLESBY: It's very early in the process, but I at least want to mention a few specific bills to watch.

As you can see, both Senator Pavley and Assemblyman Huffman have introduced bills that deal with fees and funds derived in connection with the implementation of AB 32.

SB 31 is in very preliminary form but is intended to address the uses of the greenhouse gas fees.

AB 231 also deals with fee revenues and creates the Climate Protection Trust Fund.

Both Senator Simitian and Assemblyman Krekorian have bills that would codify the AB 32 renewable goal of 33 percent in statute.

Finally, land-use impacts related to climate change will continue to be active. As you know, last year's land use bill, SB 375, was signed with the

commitment to continue to work to improve the bill.

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LEGISLATIVE DIRECTOR OGLESBY: No bills have been fleshed out yet, but there is strong legislative interest in the low-carbon fuel standard you will consider next month.

We've testified at two informational hearings and provided a number of briefings to legislators and legislative staff.

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LEGISLATIVE DIRECTOR OGLESBY: There has been recent and intense interest in the April 1st deadline for gas station compliance with enhanced vapor recovery.

At the heart of it is the large number of stations that have yet to fully comply with a requirement to install upgraded vapor recovery equipment by the deadline.

About a third are in full compliance, with another third in progress. But that still leaves a substantial number of stations, maybe 2- or 3,000, at jeopardy of facing sanctions.

ARB and CAPCOA have issued an enforcement advisory that essentially gives latitude to stations making a good faith effort to comply. But the uncertainty and the prospect of stations facing fines or closure has

lead to a request for a delay by 34 legislators.

One bill by Senator Cox, SB 507, seeks a delay while Assemblyman Ruskin --

BOARD MEMBER LOVERIDGE: How many asked for a delay?

LEGISLATIVE DIRECTOR OGLESBY: Thirty-four.

BOARD MEMBER LOVERIDGE: Thirty-four?

LEGISLATIVE DIRECTOR OGLESBY: Thirty-four members.

While Assemblyman Ruskin's AB 96 expands the scope of an existing financial assistance program.

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LEGISLATIVE DIRECTOR OGLESBY: This item was discussed somewhat at length at the last presentation. So I think I'll skip over it, just to say that on the federal stimulus -- next slide.

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LEGISLATIVE DIRECTOR OGLESBY: I'll skip over it just to say that this subject and the line of inquiry that you made about how quickly and what can be done to get federal funds has been the subject of the legislative interest and a number of informational hearings. And a number of members are seeking to do what they can to expedite California's access to these federal stimulus funds.

I'll conclude with that. And thank you for your attention and answer any questions you may have.

ACTING CHAIRPERSON RIORDAN: Thank you, Mr. Oglesby. As usual, a very good report. And I know the work is cut out for you for this coming year.

Board members, questions for the Legislative Office?

They're quiet now, but they won't be later.

BOARD MEMBER LOVERIDGE: Has Dutton introduced a formal bill to delay AB 32? Is that --

LEGISLATIVE DIRECTOR OGLESBY: Yes, he has.

BOARD MEMBER LOVERIDGE: Does he have any co-authors?

LEGISLATIVE DIRECTOR OGLESBY: Yes. He does have a co-author or two. I don't have that in front of me.

But, yes, Senator Dutton has basically introduced a bill that would delay AB 32 until the economy improves. That's the link on that.

Assembly Member Logue has introduced a bill on AB 32 on the Assembly side.

ACTING CHAIRPERSON RIORDAN: Any other questions?

Thank you very much. I know your staff is working hard as well, and they're sitting out there listening to the boss. Thank you very much.

We're going to go on to the last item, which is

9-3-8. This is a presentation on the proposed low-carbon fuel standard regulation.

The proposal is scheduled for our consideration at the April Board meeting.

Chairman Nichols asked the staff for this presentation to help us better understand the low-carbon fuel standard. Staff will be providing us with an overview of the proposal. We will also be hearing several presentations on the full fuel cycle analysis used in the proposed regulation, including land-use changes.

This is -- and I would tell you that our Chairman had intended it to be an informational item for today's Board meeting and for the Board's benefit. And it wasn't really the intent to solicit public comments at this meeting today, but that would be the purpose of the meeting in April.

While I know some of you have traveled to hear and -- but it probably is more important for you to hold your comments until the April meeting when we will take them all at the appropriate time.

Mr. Goldstene, would you like to make this presentation?

EXECUTIVE OFFICER GOLDSTENE: Thank you, Madam Chair.

As you know, AB 32 requires the Board to adopt

discrete early action measures for greenhouse gases that are enforceable by January 1st, 2010.

In June 2007, the Board designated the low-carbon fuel standard as a discrete early action measure. Transportation accounts for about 40 percent of California's annual greenhouse gas emissions. The low-carbon fuel standard would reduce those -- the greenhouse gas emissions or carbon intensity of transportation fuels used in California by an average of 10 percent by the year 2020.

We estimate that this would be equivalent to reducing greenhouse gases by about 16 million metric tons per year. In addition, the low-carbon fuel standard is designed to reduce California's dependence on petroleum, create a lasting market for clean transportation technology, and stimulate the production and use of alternative low-carbon fuels in California.

Governor Schwarzenegger has identified all these outcomes as important goals for California.

In the proposed regulation, we will be explicitly considering the emission impacts through the entire fuel development cycle from extraction to ultimate use, referred to as a full fuel cycle analysis. This approach will ensure that the low-carbon fuel standard achieves the intended benefits.

As part of the presentation today, we have invited two distinguished experts in this field: Professor Michael O'Hare from the University of California at Berkeley and Professor Steve Kaffka from the University of California at Davis. They will give a presentation on how land use changes relate to the low-carbon fuel standard. Their presentations will follow the ARB staff presentation.

I'll now ask Wes Ingram from the Stationary Source Division to begin the presentation.

(Thereupon an overhead presentation was Presented as follows.)

ACTING CHAIRPERSON RIORDAN: You need to turn on your microphone.

MR. INGRAM: Thank you, Mr. Goldstene. And good afternoon, everyone.

In today's presentation, I will present an overview of the low-carbon fuel standard.

Next slide.

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MR. INGRAM: As shown in this chart, the LCFS is designed to achieve almost 16 million metric tons of greenhouse gas emissions reductions in 2020. As a discrete early action measure under AB 32, the LCFS is responsible for almost 10 percent of the program's

greenhouse gas reductions.

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MR. INGRAM: The overriding goal of the LCFS is to create a durable framework for the introduction of low-carbon fuels into the California market. By doing this, we will also achieve a 10 percent reduction in the average carbon intensity of California's fuels by 2020, reduce petroleum dependency by almost 20 percent, and create a pathway to much greater long-term greenhouse gas reductions.

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MR. INGRAM: Low-carbon fuels will work transparently in today's vehicles and in vehicles we expect in the future. Whether the consumer drives a convention internal combustion vehicle or an advanced electric hydrogen-powered vehicle, he or she will be able to fuel up without having to consider carbon intensity when choosing a fuel.

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MR. INGRAM: Regulated parties will to have meet a compliance schedule in which the average fuel carbon intensity declines slowly in the first few years and then more steeply in the final years.

This schedule was structured to provide regulated parties with time they need early on to bring new

low-carbon fuels to market.

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MR. INGRAM: Regulated parties can comply with the LCFS by providing increasing quantities of one or more of the following fuels: Low-carbon liquid biofuels, E-85 for use in flexible fuel vehicles, electricity and hydrogen for use in vehicle fuels, and natural gas.

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MR. INGRAM: The LCFS is a market-based measure in that it allows regulated parties to use credits to achieve compliance. Credits are awarded to regulated parties who provide fuels with an average carbon intensity that is below the current compliance requirement. Compliance can be achieved with any combination of low-carbon fuels, purchased credits, and banked credits. This system lowers the cost of regulation by providing regulated parties with more flexibility in meeting the annual carbon intensity requirements.

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MR. INGRAM: Some parties are regulated at the outset, while others must opt in if they want to earn credits.

Providers of most biofuels and petroleum-based fuels are automatically regulated. Providers of fuels that already meet the 2020 carbon intensity limits must

opt in if they wish to earn credits.

Fuels in the opt-in category are shown in the slide.

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MR. INGRAM: Annually, the mix of fuels provided must on average be at or below the standard, or credits must be used to offset any deficits. Over time, the standards which fuels must meet becomes increasingly stringent.

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MR. INGRAM: The regulation includes carbon intensities for each regulated fuel. Carbon intensities are calculated from the factors listed on this slide. Regulated parties may either use the fuel carbon intensities found in the regulation or propose alternative values based on detailed fuel production, distribution, storage, and use data.

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MR. INGRAM: Carbon intensity values are based on a full accounting of all lifecycle greenhouse gas emissions. The emissions considered fall into two broad categories:

Traditional; these are emissions from the production, transport, storage, and use of fuel, and other affects. These are emissions from sources such as induced

land-use change.

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MR. INGRAM: The most common source of greenhouse gases is the any on other effects category is land-use change. This occurs, for example, when corn production is increased to meet the demand for ethanol. Corn displaces soy beans. Soy bean production expands to make up for the shortfall, and non-agricultural land has to be converted to agricultural uses to support the expansion of soy bean production.

The conversion of land from grass lands or forest to agricultural uses results in significantly higher emissions of carbon dioxide, because these lands sequester much more carbon than do agricultural lands.

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MR. INGRAM: Biofuels that do not compete with food crops for land will have little or no land-use change impacts.

In this category are fuels that not derived from crops, such as slash from timber harvesting, are derived from crops grown on marginal lands, such as switch grass, or derived from waste streams, such as municipal waste and waste oils and fats.

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MR. INGRAM: The graphs in this slide compare two

categories of fuels based on their carbon intensities: The fuels that are currently available on the left and the fuels that the LCFS is designed to incentivize on the right.

Ultimately, the LCFS is designed to bring to market low-carbon fuels that do not compete with food crops for land.

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MR. INGRAM: The bars on this graph compare the current alternative fuel mix with the expected 2020 fuel mix. As you can see, we expect to move from a present fuel mix dominated by high carbon ethanol to a future dominated by low-carbon liquid biofuels, but also shared with electricity, hydrogen, and natural gas.

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MR. INGRAM: The environmental analysis performed on the LCFS identified the regulation's reduced carbon emissions as a benefit. As mentioned previously, the 16 million metric ton reduction in carbon emissions the LCFS will bring about comprises about 10 percent of the reductions called for under AB 32.

These reductions are also three times greater than would be realized under the existing federal biofuels program.

The use of advanced technology vehicles powered

by electricity and hydrogen will create another benefit, a reduction in criteria pollutant emissions.

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MR. INGRAM: Based on an assessment of biofuel availability in California, staff analyzed the impacts of the operation of 24 new biofuel facilities in the state. These facilities would be covered by CEQA and local permitting rules, and we expect that significant environmental impacts will be mitigated through these efforts. However, as these are emerging technologies, ARB staff has committed to develop a best practices guidance document for use by the local jurisdictions.

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MR. INGRAM: The economic impact analysis concluded that alternative fuels that will come to market under the LCFS and cost somewhat less to produce than petroleum fuels.

This cost savings was estimated to be between zero and eight cents per gallon, depending on the future price of oil. These cost savings could be passed on to consumers, retained as producer profits, or divided between producers and consumers.

Staff has conducted an extensive public outreach effort to support the LCFS. To date, we've held 15 public workshops that have had teleconferencing and webcasting

access. These workshops have been extremely well attended.

In addition to these workshops, we have also conducted several training seminars and hands-on training classes on some of the basic models that are being used in the LCFS.

We have also had over 200 meetings with various stakeholders and received over 200 public comment letters. All of the materials generated have been posted on our website, including all of the public comment letters received.

This outreach has provided a comprehensive forum in which various draft proposals and technical analyses have been presented and discussed. These have been instrumental in the development of the proposed regulation.

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MR. INGRAM: The LCFS is an integral part of California's long-term greenhouse gas reduction strategy. It accomplishes its emission reduction objectives, establishing a durable framework for the transition to sustainable alternative fuels.

Within this framework, innovation leading to the creation of advanced low carbon biofuels will be incentivized.

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MR. INGRAM: We will now hear from two University of California researchers who have been working in the area of low-carbon fuels.

First will be Steve Kaffka, an agronomist in plant science at the University of California at Davis. And second, Mike O'Hare, professor in the Goldman School of Public Policy at the University of California Berkeley.

MR. KAFFKA: Good morning. It's quite an honor to be asked to speak in front of you.

(Thereupon an overhead presentation was Presented as follows.)

MR. KAFFKA: I'm an agronomist. That means I'm interested in crop reduction and crop production systems and some of the environmental effects of crop production, particularly focused here in California.

But I'm also the Director of the California Biomass Collaborative, which is interested in the sustainable use of biomass broadly.

Today, however, I'm going to focus particularly on crop-based issues, because I think that's probably -- it's within most -- it's the most difficult area I think in creating proper regulations and trying to understand it, what are good regulations.

And next slide, please.

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MR. KAFFKA: This is a very large area. And I was flattered to hear that I'm considered an expert, but I think this is an extraordinary and broad diverse area. And in many cases, it's very difficult to be an expert in all -- it isn't possible to be an expert in all the fields of knowledge that are necessary to make these fairly substantial changes in our society.

I was looking around. I found short this comment by Ernest Schrödinger, one of the great physicists of the 21st century.

And I think that basically we're all challenged to stretch ourselves and be broader than necessary, but this is my caveat to you all about my expertise.

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MR. KAFFKA: This is just for a little bit of background. We've all been very fortunate to have lived in many ways in the oil era. But the oil era came to an end.

We've had tremendous wealth, prosperity, nutrition, ease, comfort that have come to us from the use of these petroleum resources. But we know that they are finite and that -- and just thinking about this historically, the biomass era predated the oil age. And

it will -- and probably in some creative ways and proper ways will extend beyond the oil age. Biomass and agriculture in particular was always a source of energy during human life. And basically we're thinking about ways in which it can be a source of primary energy.

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MR. KAFFKA: Well, of course, all the benefits of the oil era have resulted in the kinds of atmospheric increases in CO2 and other greenhouse gases that are the object of your regulation.

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MR. KAFFKA: And you have adopted a very, very ambitious goal unprecedented basically in modern industrial times and perhaps in any time of really radical reductions in greenhouse gases. And it's going to be a challenge for us all how to figure that out.

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MR. KAFFKA: Naturally, people thought about the use of crops and agriculture for reasons based on history and the fact that such things are obvious potential sources for biofuels. These are some estimates from diverse sources in the literature of basically the

energetic benefits based on the returns of energy achieved per energy unit. And you can see quite a range, one of the lowest is corn ethanol. The newer processes in corn ethanol improve substantially on their traditional estimates. The same is true for estimates from Brazilian sugar cane. The cellulosic sources, which are not yet really mature technologies, also have tremendous potential for providing us a return on investment.

Even our current oil industry is not as energetically efficient as it once was. Drilling oil in the slope of Alaska or deep in the Gulf and using CO2 injection and other advanced recovery techniques reduce the net yield from the oil sector.

Thank you. Next slide.

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MR. KAFFKA: When the biofuel program first started, it was first getting serious in government levels at least, there were a number of objectives or benefits that were identified. And they're just some of them that are listed here.

Some of them had to do with ideas of diversification of supply including with the affects of even improving national security. There were desires to increase wealth and reduce our expensive crops surpluses, distribute fuel refining, and clearly also benefit the

environment by reducing greenhouse gases.

Next slide, please.

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MR. KAFFKA: The high oil prices that we at one time saw that -- must say, Dr. Sperling predicted would go down again and was correct about -- basically tie the use of crops and biomass to the fuel economy.

I mean, they're different thresholds at which different types of enterprises become more effective, but pretty much it's a fact now that biomass crops as well are tied in some direct way economically to the oil economy.

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MR. KAFFKA: The original way of thinking about crops -- this is an older slide from Mike Wang -- suggested that there would be potential greenhouse gas reductions that were derivable from the use of various crops. And here just corn ethanol and sugar cane ethanol are depicted.

More recent estimates of where the corn ethanol reductions are from Liska, et al, are listed there with an arrow.

Next slide, please.

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MR. KAFFKA: But if you take a large -- that's

basically those calculations are made more or less at the field scale an they're called direct effects or based on life cycle assessment.

But if you step back from that scale or increase the scale to a higher one, then you can maybe derive a different notion of what looks like what might be sustainable, including greenhouse gas balances.

So at the highest level, where we might be actually considering where the atmospheric greenhouse gas balance and with large scale worldwide ecological stability what looks like a good policy at the field level or perhaps the farm level may not be. And I think that's really the question that's being -- that we try to address when we try to talk about the indirect land use issue.

Next slide, please.

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MR. KAFFKA: Now, we're particularly concerned when we talk about indirect land use change with things that are happening far away. And this is some pictures of Sweden or slash and burn agriculture.

This is going on and has been going on essentially forever in tropical areas and continues to this day.

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MR. KAFFKA: The concern, as was mentioned by staff just a few minutes ago, is that if you produce biofuels on crop land, for instance in the United States, you're going to still have a demand for food crops that are displaced. And then the displacing that obviously can generate emissions often very far from the place where the actual fuel crop use is taking place. And that these emissions are not compensated by the carbon savings from biofuel use.

Next slide, please.

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MR. KAFFKA: The state here -- the staff has adopted the use of the GTAP model, which is fairly complicated and very impressive, I have to say, intellectual achievement. It's involving a global network of researchers that essentially models multiple factors of the economy on a worldwide basis.

You're going to hear I'm sure more about it from the next speaker in detail, so I'll just skip over it.

Next slide, please.

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MR. KAFFKA: These models characteristics have equations often linear equations that integrate the model variables and the database. The database is very detailed in the case of GTAP. And these equations tend to be kind

of neoclassical in that they predict that all the actors are rationale economic actors and optimizing their behavior.

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MR. KAFFKA: And so the model that we heard displayed by or depicted by staff just a few minutes ago that the use of corn ethanol, for example, in Iowa or Illinois reduces the planting of soy beans there, and that puts pressure on soy bean prices, which has an effect essentially on land conversion elsewhere and ends up potentially with a large release of terrestrial carbon. That estimate is effectively estimated or inferred from the operation of the GTAP model.

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MR. KAFFKA: I think the logic of market mediated effects is very clear. And, in fact, they're not even really in some senses indirect effects. They're really the result of markets operating directly to the degree that they occur.

The problem is from my perspective the importance and scale of these effects, and that's very far from clear.

This large scale economic model is uncertain and

pretty much in my view of all its important aspects. The effects of biofuels on world market prices, the responsiveness of crop yield on consumption, the price increases, in other words, technological change, and the site-specific conversion effects in particular places in the world due to those price increases, which is partly a database problem.

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MR. KAFFKA: If we turn to a different way of considering land use change, there's a discipline that's emerging that's called land change science. This is from a paper in the proceedings in the National Academy of Sciences lab now two years ago.

And when you look more specifically at the local landscape, it becomes very difficult to try to determine cause and effect. And the factors operate in one way in one part of the world end up operating differently with different outcomes in another.

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MR. KAFFKA: So there's the model that we described again. And I realize this is certainly the GTAP model is not quite so simple as this.

But the logic is fairly straightforward, and the

inference structures is fairly straightforward.

Next slide, please.

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MR. KAFFKA: This is a slide I made. It has in red -- you can see I've tried to distinguish what I would call direct effects, indirect effects, and independent forces that are multi-year forces for the same phenomenon.

So increased demand for corn ethanol does, in fact, probably in many places have an impact on cropping systems, particularly in the midwest, but so did a public policy called set aside, which was established years ago, simply to reduce farm land and reduce soy bean acres because there was surpluses. And there was one method of trying to do that, plus conserving some of the more erodable areas.

So it has an effect on soil bean prices, but increasing world demand for feed cranes from China and other places in the world has had a far more significant effect. It's been ongoing.

Big response in soy bean acres in the southeastern United States, and perhaps there was an effect on soy beans planted on high carbon forestland or high carbon pasture land in distant areas. But it's very hard to detect or measure. The ongoing land transformation process is already occurring in those

areas, however, did have an effect on land transformation.

Now, soy bean price increases could also have positive effects on developments in those parts of the world, including perhaps the additional carbon sequestration.

Next.

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MR. KAFFKA: So there are a lot of factors that are driving tropical deforestation and land transformations in other parts of the world. If you multiplied 16 by 17, you get quite a large number of potential interactive factors. No question agricultural expansion is the one of those very important ones.

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MR. KAFFKA: Now, you can't read this. Luckily each of you have a screen. This is work done by my colleague, Ted Foin, and was presented to the American Society of Agronomy meetings a couple of years ago. He spent a sabbatic year in northeast Thailand trying to understand the dynamics of the land-use change in Sweden agricultural in that region.

And you can see areas that subsections of his model include forest dynamics, valid decision population dynamics, market access, and Sweden production. Each of

those is itself subroutine with a number of factors.

What this simply points out is that when you look on specific areas, there's a whole range of things that interact that may have only faint connection to the decisions about what to plant and use in Iowa.

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MR. KAFFKA: Not only that, there are potentially large amounts of land area in the world that are not particularly well modeled, if at all, in the GTAP database. For example, we have fairly good numbers or estimates, rough estimates, of primarily rain forest areas being cut. But there's controversy over the amount of regrowth that's occurring. In fact, the regrowing of forests in the tropic areas are much larger than the ones by quite a bit that end up being cut down.

Next, please.

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MR. KAFFKA: This is from a recent study published in Environmental Science and Technology that tried to use various techniques to estimate land, the potential production on abandoned agricultural land that was not returned to forest or urban use. And you can see large amounts of land in certain areas.

And this study indicated that they thought that

the most particular potential for the development of energy crops with the most economic benefit might in fact occur -- be in Africa, where the energy needs are low and the potential for biomass from non-agricultural, non-forestlands is potentially quite large.

Next, please.

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MR. KAFFKA: Several people who work in international development think that the restoration of degraded land in the tropics and elsewhere due to new markets for biomass has the potential to significantly increase terrestrial carbon storage. In these cases, the sign of the carbon balance is wrongly predicted by a global computational model.

And that there's really substantial potential for this in a large number of sub-tropical and tropical areas.

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MR. KAFFKA: Even a little closer to home, a study published last year by Muller, et al, looking at the development of a brand-new ethanol plant in northern Illinois and what they call the corn draw area of around a 40-mile radius and within which the entire supply of corn needed for that ethanol plant was supplied, they found effectively no land transformation from woodland or

pasture in that area and that crop yield increases and related both to price and technology were the basis for meeting the entire demand of that area.

Now, this is just a small study, and, you know, you might find different answers in different places, but what I put it in here for was to indicate what the complexity of land change issue is.

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MR. KAFFKA: Now I want to finish with some more general comments.

This was -- the first is that there is an uneasy relationship between methods chosen and the outputs that you actually get. This was -- this idea was presented in a talk by Dr. Haniotis, who's the head of the European Union's Program, which is basically responsible for agricultural policy in the European Union, which means that the methods that you choose to some degree will determine the kind of outputs that you get.

Another interesting comment I thought that needed to be kept in line when thinking about how to use models was made by a man named Rotmans, who was one of the first people to invent a global circulation model to predict climate change.

And he thinks that we have to be very leery of

seeing models as truth machines, but rather as relative information generators or particularly as learning tools.

And, lastly, I think it's important to keep in mind that there's no single policy that can control the response of complex systems. If we try to use the wrong policy, we'll inevitably reduce sustainability.

Next.

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MR. KAFFKA: Let's get back to GTAP again.

Basically, these models run the economy. At one point in time, the results are interpreted as showing that only one or few variables are changed. Everything else is held constant. So for instance, we might look at the crop withdrawal from food and feed markets for biofuels. It assumes the future, behaves like the past. Adjustment is instantaneous, and there's limited technological change occurring.

Basically, you get differences that are shown between the with and without the policy shock. How much new land was brought into production. But effectively, the causality is built into the model. It almost has to have that answer to be able to have a solution.

Next, please.

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MR. KAFFKA: I think there's some other things to

consider when we're talking about the indirect land use change and crop base biofuels.

I think that the dichotomy between food and fuels is not really a sound one. Really, the question for us in going ahead in the future in using agricultural resources for this purpose is can we create more sustainable agro ecosystems that are more diverse and profitable.

It's not what -- these crops are all integrated together. In many cases, crops grown for biomass can facilitate the improvement in sustainability in cropping systems.

There's also a distinction that's often made between first generation and second generation biofuels. I think that's partially arbitrary. If you use the entire crop plant, corn or beets, for example, or other crops, then the energy yields could be similar to or even greater than so-called second generation crops like switch grass, particularly since they're more productive and energetically efficient to produce.

And if you have integrated bio refineries processing that waste, the energy produced, the biofuel, might actually be a byproduct of some other desirable economic activity.

Next slide, please.

--o0o--

MR. KAFFKA: I, just as quick example, put just a few slides in to show how that might be the case for my own work. This is about safflower, which is an oil seed we grow here, a high quality oil.

Next slide, please.

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MR. KAFFKA: We grew safflower without fertilization to see how much essentially soil nitrate -- might even consider that a pollution that would suck up. And in fact, it's one of the deepest rooted annual crops we know. And responded quite well to residual soil nitrogen. That's really all you need to take away from here, but more than a ton of yield with no fertilizer.

Next.

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MR. KAFFKA: You can see it basically depleted residual soil nitrogen in the previously high fertilized plots. That nitrate would ultimately be a pollutant for groundwater. So an oil seed potentially grown for biofuel or for some other biomass purposes can have very positive effects on cropping systems.

Next.

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MR. KAFFKA: This is a schematic that I got from NREL that indicates the potential future bio-refinery in

which you can see with the diverse feed stocks coming in, lignite cellulose feed stocks or others, the numbers are not critical. What's important is the diversity of processes and products and outflows that are potentially there, including other chemical feed stocks, pyrolysis, syngas, ethanol, and other perhaps animal feed byproducts and other things. And this is not just theory.

Next slide.

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MR. KAFFKA: This is a site I had an opportunity to visit just last week in Germany. It's the newly constructed sites mostly ethanol facility in Zeitz, Germany. It uses sugar beets, small grains, and maze as a feed stock. It's powered by lignite plus biomass, which improves actually the carbon utilization of the lignite which they have in abundance there.

The products produced are ethanol, biogas, electricity, animal feeds, nutrients, and pending or plans to produce chemical feed stocks. So these integrated bio-refineries are potentially real, and I think they are the wave of the future. They change a little bit how I think at least about the relationship between primary and secondary generation crops and biofuels.

Next, please.

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MR. KAFFKA: So I'll be done in just a second. I know I'm running long.

I think the decision to impose an indirect land-use handicap on agricultural biofuels was premature and occurred without a sufficient understanding of the nature of agricultural systems. I think it tends to violate the principle or performance standard by creating a potential -- excluding a potentially viable biofuel source and methods.

Next.

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MR. KAFFKA: I think also California -- this is just my view -- should encourage indigenous biofuel production do its share to reduce greenhouse gases without exporting all the consequences of doing so to other locations.

I think this is partly a matter of ethics, but it's also true that I think we can have the best and most accurate greenhouse gas estimates for our local systems.

Lastly -- not lastly but nearly last, the key to this transition is going to be entrepreneurial innovation. And I think we should err on the side of encouraging such innovation.

Next.

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MR. KAFFKA: Lastly, this is a huge, huge task. I think we're not just simply setting a CAFE standard here, this really involves all elements of how we live. It's far reaching. It's fundamental, and it's complex. And I think prudence and time are needed to maximize our net benefits.

Next, please.

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MR. KAFFKA: This is just a cartoon I've done of what maybe sustainability might mean. Sustainability includes a huge number of things. I've just put four in there.

Next slide, please.

--o0o--

MR. KAFFKA: Carbon regulations tend to take one greenhouse gas reductions and essentially subordinate some of the other considerations that we have or value to that particular thing.

Next, please.

--o0o--

MR. KAFFKA: There are -- putting the slide back up again. I wanted to point out that AB 32 and the low-carbon fuel standard are not simply just greenhouse gas policies. They have broad profound effects across many sectors, perhaps unintended.

Next, please.

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MR. KAFFKA: Just to point out again that slide that I had before -- one next, please.

--o0o--

MR. KAFFKA: So how should we regulate?

Well, I think we have to be humble and expect mistakes as we go along. I think we have to go slowly. And I think we should gradually increase sustainability standards and knowledge and public consensus improves. I think we need to use as light a touch as possible in trying not to constrain innovation and be willing to make prudent trade-offs.

In my view, the long-term public benefits from this will outweigh short-term losses, if any.

In the fundamental way, sustainability means flexibility. Our ability to adjust to the unexpected. I think that has to be a characteristic principal of regulatory policy.

Next.

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MR. KAFFKA: This is my last one.

I think the indirect land-use change should be estimated using several methods with a preference for direct estimation, not inference. I think reliance on a

single model is unwise, because no one model is currently able to deal with this complex issues adequately. And additional time is needed to create comparative ILUC approaches. And then in the meantime, we should rely only on the best direct greenhouse gas estimates.

Lastly, California, the U.S., and the European Union I think we have to try to tackle some of the undesirable effects of land-use change on a different way by looking at direct intervention to protect the most important high value ecological areas in the developing world, while still allowing for their fulfillment of their much needed development.

Thank you.

ACTING CHAIRPERSON RIORDAN: If you don't mind I'm not -- I'd like everything to be brought forward before we do any questions.

(Thereupon an overhead presentation was presented as follows.)

MR. O'HARE: I have some copies for the Board of the paper that's currently under review at PNAS.

ACTING CHAIRPERSON RIORDAN: Our staff will pick that up and share that.

MR. O'HARE: I'm Michael O'Hare, professor of public policy at UC Berkeley.

And I was asked to talk to you a little bit about

our research for implementation of the LCFS. I think I'm not going to show you a bunch of slides, although I have of course -- like every professor, I have a computer full of slides. But let me talk through some of these issues. Then I think if the Board wants to come back with questions, I'd be glad to clarify some stuff.

As you know, we've been working on this for a couple years. I do have to say from the start as a former State regulator -- I ran a policy shop in Massachusetts in the environmental affairs office, and I worked for government clients of different kinds in different states, and I've never dealt with a more scientifically focused, attentive, curious bunch of staff than I have at ARB. And you guys should be really pleased with the team you have here. And that does not go without saying.

I also want to emphasize for the Board that the low-carbon fuel standard is not just about low-carbon fuel in California. Because the way events have unfolded, it's an international precedent. And a lot of jurisdictions in the United States and elsewhere are waiting to see what we do.

So the implementation of this policy is going to have consequences quite a bit broader than the State and possibly broader than fuels.

I'm going to focus on land use change, because I

think it's the most controversial element in the low-carbon fuel standard. I'm also going to make reference to Steve's discussion, because I agree with almost everything he said.

And I should also say one of the great things about my job is that I get to meet all these people. I mean, my company is full of really smart people who know a lot of stuff and are happy to tell you about it.

And Steve's talk there was good example of that.

So what the big questions for land use change, which, remember, we're thinking about is being an additional attribution of carbon discharge for fuels that have this indirect international food marketed -- food market mediated effect. Is there a large land use change greenhouse gas effect?

And the answer I think is absolutely certainly yes. There's very little argument now from any source that I've come across that says, no, it doesn't matter. It's zero. That land use doesn't change in this way.

So the next important question, of course, is how big is it? And right along with that is how do we estimate it?

And the answer there pretty clearly is CGE models of various kinds, not necessarily your one only, the one that we and the ARB have decided to use, which is this

very open source GTAP model.

But there are others on the table and coming along, and I look forward with great interest to see how they come out.

So the next important question for the Board is are these estimates sound enough to be a basis for policy making?

And again I think the answer is clearly yes. And a question that follows right along after that is, well, will these estimates of LCFS get better in the future?

And my answer to that is also yes. That we're going to know more about this, and we're going to have even better estimates. And we're going to learn as -- when I say we, I mean the world scientific and policy community. And I think that's not inconsistent in the slightest with saying the current state of knowledge is appropriate for having an LCFS and we're attributing global warming index to fuels and getting on with it.

The next question that comes along is, well, if we have to select this number, this land use change global warming index element term, is there a safe direction to err? What would it mean to be conservative in estimating this number?

Now, I'm a structural engineer by training. And when we design buildings, we act as though the strength of

a piece of steel is much less than we know it really is, because, on the one hand, if you get that wrong in one direction, the building costs more than it would otherwise if you really design the way airplanes are designed where every little bit counts.

And if you err in the other direction, then the building falls down and kills people. And it's pretty clear which one of those is worse. So there is a clear, safe direction.

In this case, it's not clear to me that there's a safe direction in which to tilt the estimate of land use change or any other of the global warming indexes for fuel, because the consequences of these numbers is that these fuels are traded against each other in compliance with the LCFS. And if we -- let's just take for an example the one that's most salient now, which is corn ethanol and gasoline.

If we use a number for corn ethanol's global warming index that's lower than it really is, we'll use more of it than we would to minimize carbon discharge, and we'll warm the planet too much.

And if we estimate that number too high, then we'll use not enough of it and too much gasoline, and we'll warm the planet too much.

And it seems to me that both of these errs, given

what we're concerned about is global warming, are about equally concerning.

So again I think the task of the Air Resources Board is to make its best efforts to hit the target in the middle and not to tilt off in one direction or the other.

So let me talk a little bit about how big this number is.

I didn't plan to talk very much about what GTAP is and how it works. I'll willing to, and I have a couple of slides that could probably illuminate it, but it is large and technical. And it's actually kind of boring.

(Laughter)

MR. O'HARE: But, you know, the way the wheels turn, I think have to be an economic modeler to really get off on how you put these things together.

And I mean no disrespect to you at all --

ACTING CHAIRPERSON RIORDAN: I think you're absolutely right.

(Laughter.)

MR. O'HARE: No. I'm not an economics basher in any way. But I think this particular exercise is the kind of thing I'm really grateful there are people who do it.

I do want to say one thing, and that is that these models are -- first, they're based on a database, which a database of world trade and changes in trade

amounts and response to prices which are updated and collected and vetted and poured over by people and those databases are about as good as we can make them.

The second thing is that the principle of this model is what may be the most fundamental principle of economic behavior. It's not controversial. It's absolutely at the core of everything we do from a policy perspective and which affects a world in which people are trading goods. And that's the law of demand. And that law says basically that when the prices of two goods change, the world is going to use more of the one whose price went down and less of the one whose price went up.

And that is not a controversial or dubious judgment about the world, although the size of the effect has to be observed from data.

All right. So how big is this land use change number?

Now, I want to be clear about the question. Some of what Steve was talking about is actually sideways or orthogonal to the question that's needs to be answered here.

I believe that question is properly stated as how much greenhouse gas, more or less, will go into the earth's atmosphere if one mega-joules worth of a given fuel is substituted for another? The low-carbon fuels

standard is an exchange process in which we contemplate that this fuel will used more and that fuel will be used less under the constraints of the cap.

And to get the right adjustments, we have to estimate the right carbon discharge for the fuels. And again, it's a carbon discharge resulting from that substitution.

It's not -- the question we have to answer is not could the world make more of some biofuel without any land-use change effect?

It could. Of course, it could. If we -- it's easy to imagine an increase in corn yields so that you intensively cultivate, fertilizer, better use, improved varieties, and so on and get not only the corn you ate last year, but also some biofuel to burn this year off exactly the same hectare of corn land. But that's not the question.

The question is if you did those wonderful things to corn yields, now would you like to use your increased corn production capacity to grow food or to grow biofuels? And it does not follow that just because some increase in the world's productive food capacity occurred that it should be devoted to biofuels or that it shouldn't.

To answer that question, you have to ask, well, in the context of the LCFS, what's the carbon discharge

effect? And following Steve's I think next to the last slide, what about all those other effects, those sustainability considerations of rural employment and trade security and fuel security and so on? Those are all interesting and important questions.

One more thing I'd like to emphasize about this land use change effect that I've seen to be very salient as I would sort of wander around the world to talk to colleagues in different places.

You have to keep in mind that the land use change happens very far from where the feed stock is grown. There's almost nothing that a corn farmer can do on his corn field with the best intentions in the world to change the land use consequence that's happening halfway around the world because of his corn production, except to increase yields. And to a first approximation, crudely, it is fair to say, well, if you can increase your corn yield by 10 percent, then that corn is going to have 10 percent less land use change discharge than the corn next door. So yields matter.

But other than that, there's almost nothing you can do at the place of production. The things you -- the things -- I have to say this carefully. It's very dangerous to use pronouns.

The things that can be done to reduce land use

change other than yield increases can only be done by the forest warden in the northern region of Mato Grosso county in Brazil, and that person does not report to you. And California has no direct influence over the management of forests in Indonesia, Brazil. Not that it isn't important.

Now, whether we should take these kind of effects seriously I think the nearest analogy is if we have more drug use in the United States because of some change in our criminal justice policy, some would claim that that's going to cause more blood to flow in the streets of Mexico and Columbia. And not because any of the drug users here especially wanted to cause death and mayhem in Juarez, but because it's predictably the case that that will happen.

While recognition of that -- recognition of that causal relationship as a basis of U.S. policy has now been announced yesterday by our Secretary of State. So it's not a crazy idea that things that happen far away, for reasons of economic influence that require some subtlety in modeling are nevertheless real and should be treated as though they are. And that's the claim that I'm comfortable in making about this land use change effect.

All right. So I promised I'd tell you how big it is.

(Laughter.)

MR. O'HARE: We estimate a one-time discharge -- by the way, all the numbers obviously are in the filing on the ARB website preparation for the Board hearing. So there's no point my reading your own stuff to you.

We estimate a one-time discharge associated with the capacity to grow one mega-joules worth of ethanol per year at about 800 grams for ordinary U.S. corn.

So, there's going to be 800 grams of carbon blown into the atmosphere as the result of this land use change effect.

If you put yourself in a position to grow one more mega-joules worth of corn every year then you did last year, of corn ethanol then you did last year, because of the interaction with food markets.

Now, here we come to -- I said nice things about CARB as a client.

On the other hand --

(Laughter.)

MR. O'HARE: These guys seem to think that they are hired by the State to do their own independent thinking and not simply to put my stuff on the website and make policy. I can't understand this. But here it is. So there is some advice that my colleagues and I have given them that they have not accepted.

First thing that CARB is doing with this one-time

800 gram discharge is to divide it over 30 years of ethanol production.

Now, that number comes from Tim Serchinger's paper a year ago. And I talked to Tim. I said, "Tim, what makes you think people are going to be growing corn ethanol for 30 years? There's just so much other stuff coming down the pike that's more efficient and more effective."

He said, "I just wanted to pick a number that nobody could argue with me about it."

You know, he wanted it to be so large that it wasn't going to be an issue.

I mean, that's not a strong scientific basis, and I would very much like the State to reduce that number, even if it's only going to do this direct allocation.

Of course, if you think 20 years is more realistic than 30 years, then the 27 gram per mega-joule of ethanol -- is everybody clear about that? Eight-hundred grams per mega-joule per year of ethanol production, if you think you produce for 30 years means 72 grams per mega-joule of ethanol. If you think it's produced for 20 years, then it's going to be half again as much, because you're dividing the initial discharge.

So I think that number or production of years should be less.

The second thing is that we've done some GTAP modeling in which we held food production constant. And the Board has I believe undertaken to recognize sustainability considerations and not just carbon and regulating fuel.

And food supply is certainly a sustainability consideration. And it turned out that when we held food production constant -- remember the law of demand. If you use more corn for ethanol, there's going to be less to eat. Not one for one displacement, but less.

This machine is -- all the parts of this machine are attached together by springs, but they're not not attached. So there's -- you get partial responses.

So if you hold food consumption constant, then the discharge goes up by 50 percent. So we're talking about 1200 grams at the start instead of 800.

The next thing is that we've done an analysis of how you should think about these discharges that occur at the beginning of the production process rather than evenly through it.

This is really important, because the land use change discharge occurs all at once at the beginning of the production period for your biofuel. And then it sits in the atmosphere, because the residence time of carbon dioxide is fairly long and goes on warming the planet much

more than it would if it were dribbled out over the 20-year production period. So when we're comparing something like fossil fuel that releases a steady constant stream of carbon over a period of 20 years, something which puffs out a lot of carbon at the beginning and then somewhat less, you've got a lot more global warming than the totals of carbon would seem to imply.

And we've shared with the Board a paper which is that close from publication at ERL in which we presented a model -- fairly flexible model in which you can actually put in these discharges and see how much the relative global warming effect of fuels compares rather than just the volume of carbon you discharge.

And, again, I want to emphasize in this particular situation where the carbon discharges aren't uniform where you got a lot of carbon right at the beginning, I believe you have to recognize that in making the estimate, and that gives you about another 50 percent increase in the GWI that should be assigned.

So in evaluating and judging the work of the staff, I'd say if we were aiming for the middle of the target on land use change effects mostly fuels that looked at -- it might more or less for different ones -- should be between two and three times higher. And I'd also remind the Board that the current state of affairs is that

the only peer reviewed published estimate of land-use change impact discharge is for corn, and it's still 104 grams.

BOARD MEMBER SPERLING: What did you say was two to three times higher?

MR. O'HARE: If you were aiming for the center of the target as I advise -- that is, you didn't think low was safer in some sense. If you apply the corrections that I mentioned here, you'd be between two and three times the value of 27 that the staff is recommending that you use. So don't listen to them. It should be larger.

(Laughter.)

MR. O'HARE: That's not all. There are other factors which we have not analyzed and therefore can't be used as regulation. But I hope the Board will be aware that these -- this train is coming down the tracks.

And a couple of the most important are that, awkwardly, economic models don't handle land that doesn't have an economic life. We call this unmanaged land, and it's wild forests that you can buy from anybody because it's property of the State. And the price of getting access to it, for example, is to bribe the local Governor or send out thugs to drive people off it or something.

So what's the price of that? And on our work schedule for next year is to try to force our economic

models to recognize these goods that don't have any economic price that you can get in the usual kind of data. And we want to include that, because we know that deforestation of unowned land is going on.

The other one is peat forests which we don't recognize independently, and it's pretty important -- if you deforest some areas of Indonesia where there are very deposits of peat, and that peat decay goes in the atmosphere, the discharges are much, much larger than you get from a normal piece of forest.

So both of those again I believe are going to tend to push these estimates upward.

We also have other models coming down the line. EPA is doing a really admirable piece of work not without defects, which I -- you know, which I hope they'll be able to improve. But they have a large integrated model that takes those direct and indirect effects together all at once. And those of us who do this are very anxious to see what they come up with and pick it apart and learn from it.

There are not -- GTAP is being used to model a Brazilian land use change effect. We have made our estimate, but I would feel much better if I had other estimates from other scholars to compare. And I believe that's coming from my friend Bruce Babcock at Iowa State.

ACTING CHAIRPERSON RIORDAN: Excuse me. Can I interrupt you? Can you just pause for one second?

Let me make a suggestion, because I'm trying to accommodate several interests here.

One is the information that you all have that you shared with us. And it's very complex, as we all agree.

There are some people who have requested to speak, which I did not realize was going to occur, because we thought it was information only.

I also know that I want to keep a quorum of this Board together.

And some of us have some planes to catch. We are not in this area.

So I'm going to do the following things. I'm going to give you perhaps two more minutes to sum up. And while you're thinking of how you're going to sum up -- and, staff, I'm going to tell you that there isn't much more time, so I hope that you summed up previously.

And then to those of you who wish to speak, I've looked at the list. There are six of you. You are all professionals. I am going to say to you that I'm going limit your testimony to two minutes. You can make your points, and that we will take. And then recognize that we will be back here in April to hear a full series of conversations back and forth on this subject.

But I do want to keep my quorum. I do want to give everybody an opportunity, but I've got to close it down.

And so back to our professor for his conclusion.

MR. O'HARE: The thought I'd like to leave you with is that social science for estimating land use change effects from biofuels is entirely up to the task of regular -- of implementing the low-carbon fuel standard in a responsible -- politically and environmentally responsible way. And that science will improve and the estimates will improve. But that's not a reason in my view to wait if you want to have a low-carbon fuel standard. It would be incoherent to issue a rule for the standard that didn't recognize this very large effect whose existence is not controversial and whose size is actually not controversial either.

ACTING CHAIRPERSON RIORDAN: And I thank you.

You did a very good job with the amount of time I gave you to conclude.

Let me indicate, if it's all right with Board members, I have Anibal Guerrero, Timothy O'Connor, Bonnie Holmes-Gen, Pierce Welch, Todd Campbell, and Roland Hwang, if you'd all come forward. I'm going to begin with Anibal. And you have two minutes to make the point that you wish to make. And then I'll go back and open it up

for our Board's conversation and questions with staff and our expert witness.

MR. GUERRERO: Good evening, staff.

I'll try to make this as quick as possible.

My name is Anibal Guerrero with the San Fernando Valley Chapter of the Mexican American Political Association.

Thank you. We applaud the work you're doing to improve our environment and address the challenge of global warming. We worry about environmental issues that impact our community. We also worry about economic issues. AB 32 Scoping Plan acknowledged that higher energy costs associated with carbon reductions would disproportionately impact low income communities. That's more true now that unemployment is over 10 1/2 percent and many of our members are struggling to pay their own rents for their families.

If the low-carbon fuel standards means even a small increase in gas prices, public transportation fees, or higher costs for food and other things that are fuel dependent, it's going to hurt our communities even more.

As I've said, we worry about environment as well. We think a low-carbon fuel standard is good. It has to be fully researched not only for cost but for environmental impacts. CARB adopted a new gasoline. There were

unintended water quality problems from the new fuel additive. It was expensive and dangerous.

If you mention that in our communities today, many years later, people know exactly what you're talking about. They will tell they don't want to be seeing this repeated again.

Because of that experience, the State now requires an environmental impact analysis before a new fuel standard is adopted. It is imperative that you do as much research and testing as possible before moving forward with this rule to protect not only the environment, but public health.

We want the low-carbon fuel standard to succeed, but we won't want it so badly that we're willing to accept a policy that is pushed through without responsible research and evaluation. We're not convinced all the necessary work can be done and considered before this comes up for a next -- for a vote next time.

During the Scoping Plan process, this Board promised the community it would thoroughly analyze each individual policy proposal under AB 32. We hope you will take that promise seriously and insist that your staff do everything required to give you a complete, accurate picture of the economic environmental pros and cons before you make a final decision on the low-carbon fuel standard.

If you need more time to do it, by all means, please do.

Thank you.

ACTING CHAIRPERSON RIORDAN: Thank you, Mr. Guerrero.

Mr. O'Connor.

MR. WALKER: I'm actually Derek Walker from Environmental Defense Fund. Tim had to leave.

Thank you very much for giving us a few minutes here.

Unequivocally, emissions from land use change are a tremendous source of greenhouse gasses in the atmosphere, and domestic fuel use has an impact.

In the development of this regulation, we would strongly encourage the Air Resources Board to ensure that there's some quantification method and mitigation for the leakage of emissions that are caused by indirect land use change.

Just recently, there was a study done which indicated that even if the developed world took aggressive action to try to halt climate change, the deforestation problems in the tropical world -- parts of the world would more than nullify those efforts. So that's just one small example of the tremendous impact.

So in deference to the fact that there other people behind me, I would just say we need to take a step

back and remember that when we passed the Global Warming Solutions Act, we committed this State to getting back to 1990 levels by 2020, that this is an environmental regulation that we are endeavoring to implement. And that if we do not have the indirect land use change in this regulation, it will compromise the environmental integrity of this regulation. And it will probably negate the benefits that we are all trying to achieve.

Thank you.

ACTING CHAIRPERSON RIORDAN: Thank you very much.

Bonnie Holmes-Gen.

Let me - Tom Koehler and Tom Fulks, you have signed up, and come forward so you're ready to go when you're called.

MS. HOLMES-GEN: Thank you. Bonnie Homes-Gen with the American Lung Association of California.

And first I want to make sure that you know the American Lung Association strongly supports moving forward with the low-carbon fuel standard. I know this is not a regulatory hearing, but wanted you to know we do view this as an essential component of the State's global warming air quality strategy.

Second, I wanted to emphasize our support for the inclusion of indirect land use as essential to developing a regulation with scientific integrity, one that will

truly reduce greenhouse gases on a life cycle basis.

And opponents of the regulation have been trying to stir controversy in this area, but CARB's conclusions on indirect land use are supported by good science. And in fact, CARB's numbers are conservative. You will hear that there are other studies that identify much higher numbers for indirect land use.

So CARB must move forward with indirect land use, and we would even support a higher number.

And, third, I wanted to mention two recommendations for strengthening the regulation. One, to include stronger provisions for air quality and public health review. And two, to ensure that CARB increases the levels of ultra low carbon fuels in order to maximize air quality benefits.

I take it my time is up.

ACTING CHAIRPERSON RIORDAN: Thank you, Bonnie.

Pierce Welch.

MR. LOMBARD: Good afternoon. My name is Edwin Lombard with the California Black Chamber of Commerce, and I'm going to represent Mr. Welch. He had to leave.

Mr. Welch is the owner of Christopher Pierce Enterprises. His company produces and distributes brand promotional items for businesses and other organizations throughout the United States.

Like most businesses, his has been impacted by the economic downturn. Costs are up. And his costs are being increased by shipping costs, in particular, which is a fuel generated cost. And anything that impacts fuel or energy costs is increasing for him, and it's always a problem.

It seems that your staff has inadequately explored the availability of low-carbon fuels and the cost of such fuels to consumers or to small businesses like his, which I believe is required for a new fuel formulation.

It also seems that California is the only state that is pursuing such an aggressive and ambitious new fuel policy. This reminds me of when CARB introduced the new diesel formula about 20 years ago. For no one else did it for it wound up helping to make it more expensive for other states. There's no reason to believe that low-carbon fuel standards won't have a similar effect only greater since it does just about make the -- it does just about make a different kind of gasoline and diesel, but about believing new fuels that doesn't -- that hasn't been completely perfected yet.

It's not that I'm against reducing carbon emissions, because I'm totally for that.

But it's not fair and it's not smart to rush into

this without knowing what it's going to cost and how it might impact fuel supplies.

For one, I think many other businesses would agree --

ACTING CHAIRPERSON RIORDAN: Excuse me. Your time is up.

MR. LOMBARD: I'd just like to end saying based on what we've heard today, we feel you should take more time and do it the right way, especially since the United States and the world is watching what California does.

ACTING CHAIRPERSON RIORDAN: Thank you very much for representing Mr. Welch.

Todd Campbell followed by Roland Hwang.

MR. CAMPBELL: Thank you, Madam Chair. Todd Campbell, Director of Public Policy for Clean Energy. And thank you for acknowledging me as a professional.

I just wanted to say we support this rule wholeheartedly. We think that the staff has done a very excellent job and has done its homework.

We also would like to support the inclusion of land use effects. We think it's very important and we ask that you include our fuel as well in that analysis. We think that we will fare well. And if we don't fare well in certain applications, we'll do our best to improve our operations and reduce those impacts in terms of carbon

impacts.

We do have some areas of concern that we would like to address with staff in the interim and also meet with you before the next hearing. Someone has to do the EER values that were given to us, which we don't think are fair. Some have to do with some of the potential considerations of trading in the feature, particularly actually bringing in other credits from the AB 32 program. And others have to do with -- we would really like to see domestic LNG analysis done. We think it's a compliant fuel. We do not believe imported LNG may fare well. In fact, it may not be a compliant fuel. But we do certainly think that the domestic LNG should be evaluated.

I've been told by staff that it will be. It's coming soon. But I just wanted to assure that we are concerned that it hasn't been to this point. We'd also like to see an evaluation of bio methane blends, not just straight bio methane.

I have a few other concerns, but in the -- knowing there's a time constraint, I look forward to meeting with each and every one of you next month and to a very successful Board adoption in April.

ACTING CHAIRPERSON RIORDAN: Thank you very much. And Todd, I encourage you to work with staff on your issues.

MR. CAMPBELL: Can I also just say we support the environmental community's efforts to not have backsliding in terms of air pollution on this rule.

ACTING CHAIRPERSON RIORDAN: Okay.

MR. HWANG: Great. Thank you, Madam Chair and members of the Board.

I know it's getting late in the hearing today, so I will be quick.

My name is Roland Hwang. I'm the Transportation Program Director for the Natural Resources Defense Council.

You've heard a lot here today about the low-carbon fuel standard and indirect land use change factor. You'll hear a lot more between now and April 23rd is my prediction. This is a complex issue. But the Air Board I think is an agency. Staff and the Board members are well suited to deal with this complexity. That is the nature of your business, and we appreciate the staff and the Board tackling this very tough issue.

The main issue I want to bring to you today is the fact that this indirect land use change issue is an issue both at the federal level and here in California. And the ethanol industry is fighting it in both Washington and here in California.

Where are the national environmental groups?

National environmental groups, 17 are on this letter -- which I can distribute to the Board today -- have signed a letter voicing strong support in the federal RFS regulations for the inclusion of indirect land use change emission factors. Let me read from this letter very quickly. Couple quotes. The policy implication is exactly the same for the LCFS in my opinion as is for the federal RFS.

Quoting a couple sentences.

"Ignoring the emissions from indirect land use change will undermine the environmental benefits from the RFS 2 and set a poor precedent for any future policies attempting to reduce global warming pollution from the transportation sector and other sectors.

"Moving ahead with the rule, in this case the RFS 2, but delaying or emitting the inclusion of indirect land use effects in the model would imply that farmland is limitless and would ignore the major impact to agriculture and deforestation on the climate. This is clearly not supported by the science or by the statute, in this case the federal RFS 2 statute called ESA of 2007.

Seventeen environmental groups, natural environmental groups -- I could list them if you'd like, but I think my time is up. I appreciate you attention.

ACTING CHAIRPERSON RIORDAN: You can just submit

that letter, as you well know. Thank you.

Tom Koehler.

MR. KOEHLER: Thank you.

Tom Koehler, Pacific Ethanol.

Just -- this hearing was just to give you, the Board, an idea of what's to come. And I like to stress several things to consider between now and April.

Professor O'Hare said land use change is not controversial. It is. The fact that it happens is true. But what causes it is controversial.

You, I believe, have seen a letter from 111 scientists across the nation and the world from the National Academy of Sciences, national laboratories, and universities across the country saying that there is not enough information to make a regulation on it.

The EU has been studying this and just recently said we should -- they put forward the regulation and said we should study the indirect causes and solutions for at least 24 months. So I want that to be pointed out.

Secondly, what we really want is good science and a fair playing field. What the indirect land use issue is is carton economic effect of biofuels into -- plugging it into agriculture. What are the economic effects of plugging in a vehicle into the electric grid? What are the economic effects of using more natural gas for

vehicles? What are the economic effects of petroleum itself?

If I drive a Prius and I save money because I'm using less gasoline, but I use that money to buy a flat screen plasma TV, what are the carbon effects of that?

None of that analysis has been done. Until it is, you do not have a fair playing field. You do not have a true performance standard.

Last is a request, which is --

ACTING CHAIRPERSON RIORDAN: You're going to have one second.

MR. KOEHLER: There has been a study showing that the land use impacts of biofuels carbon impacts are zero.

ACTING CHAIRPERSON RIORDAN: Stop. You can send any confirming information and make it part of the record and the clerk will get it to us. Thanks, Tom.

Tom Fulks.

MR. FULKS: Madam Chair, Board Members, Tom Fulks. I'm here today representing Neste Oil, which is one of the world's largest consumers of bio feed stocks for fuels, one of the world's largest producers of renewable diesel fuel.

And I just wanted to express our gratitude to your staff for taking the time to meet with us and to really sit down and have a good long dialogue about this

indirect land use issue.

What I wanted to stress and request of your Board is should the indirect land use science be adopted -- and it looks like it's going to be adopted in the low-carbon fuel standard -- we think it would be a good idea, because there is so much controversy and so much new information coming out all the time, to install a mandatory periodic review of the indirect land use numbers and science, much the same way under the ZEV mandate. There is a required periodic review once every two years.

It may not be a bad idea to give your own staff and your own regulations the flexibility to incorporate current science when it comes in. And given that we're sort of trying to front load the low-carbon fuel standard and get it adopted, it may be a good idea to increase the frequency of those reviews at the beginning of the process and maybe stretch them out a little bit longer once we have a good handle on all the science.

As you heard today, your own experts could talk all day long about this stuff and still not really get to the bottom of it.

So we would suggest is a mandatory periodic review written into the regulations so that we can accommodate new science as it comes up.

Thank you very much.

ACTING CHAIRPERSON RIORDAN: Thank you very much. Thank you for being here to testify.

All right. Let me bring it back to Board members. Board members, do you have any questions, comments?

Yes, Dr. Balmes.

BOARD MEMBER BALMES: Just so I don't forget, I think the last speaker's suggestion about a periodic review of the science was an extremely good one. I was going to suggest that myself.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: That is in our proposal for looking at all aspects of the regulation about three years out.

ACTING CHAIRPERSON RIORDAN: Good.

Dr. Telles.

BOARD MEMBER TELLES: Professor O'Hare, thank you for your paper here.

I notice that this is mostly in regards to corn ethanol. And do you have information for us maybe on a website someplace that would include all biofuels? From what I read, it sounds like corn ethanol is going to be there for a while, but things are going to come in and maybe some of these models are going to be changing.

MR. O'HARE: We've done modeling for you for Brazilian ethanol and for soy bean biodiesel. And we've

got a couple of other -- let's see. We have to do cellulosic down the line. I mean, we're here to help. Anything you ask us for.

But the rule-making that's -- the rule-making that's up for Board review in April contains estimates for all of those -- everything, right?

STATIONARY SOURCE DIVISION CHIEF FLETCHER: This is Bob Fletcher.

If I could clarify that a little bit. We are proposing that as part of the rule-making package that the numbers that we've developed for sugar cane ethanol and for corn ethanol for indirect land use be approved as part of this package.

The soy biodiesel number is still under review. We're looking at it. We weren't quite ready to propose it.

But we have established in the regulation a mechanism that allows for the development of fuel pathways for any fuels that would be used in the LCFS. And that includes as part of it a review of the indirect land use. We will continue to do that.

But others can submit information to us as well as part of the procedures. So there is this kind of ongoing process as new fuels and new pathways are developed.

For example, miscanthus is under development, but there's really not information yet for us to develop a pathway. So once somebody is in the development stage for miscanthus to ethanol process, they can come to us. We will work with them on a pathway and provide some certainty on what that -- what the overall carbon intensity will be, including any land use changes that might result.

BOARD MEMBER TELLES: Another question to Professor Kaffka. Is it Kaffka?

MR. KAFFKA: That's fine.

BOARD MEMBER TELLES: Just like the author?

MR. KAFFKA: Almost.

BOARD MEMBER TELLES: In one of your slides, you mentioned the return on investment for new gasoline is like 15 to one. And by that you mean the return -- equivalent return for energy out of that investment --

MR. KAFFKA: That's an energy -- not an economic -- energy return.

BOARD MEMBER TELLES: And for all the biofuels, it's down below two or three?

MR. KAFFKA: No. No. The slide actually includes a range of estimates for biofuels. For biodiesel from soy bean, the standard estimate has been around three

units per energy used in the direct production.

For corn ethanol, it's less than that. It's 1.3 to 1.6 or so. So 60 percent.

And then for sugar cane ethanol in a new plant where all the gas is burned, it could be 11 to one.

BOARD MEMBER TELLES: Just using those figures just for a ballpark figure, what price for fossil fuels per gallon does this thing kind of get economically neutral?

MR. KAFFKA: For the estimates that I've heard -- and you had better ask someone who's making ethanol out of maze or corn, but somewhere between 60 and $70 a barrel for oil, more or less, seems to be the break point, at least some of the calculations for making corn ethanol competitive.

Sugar cane ethanol in Brazil is competitive at a lower price. In fact, they're primarily fueled by ethanol in Brazil, at least a substantial amount right now.

BOARD MEMBER TELLES: I've heard numbers like, you know, $4 a gallon or 3.50 a gallon for gasoline.

MR. KAFFKA: Converting it to that, yeah. It's a higher price for corn ethanol than we're currently paying for gasoline. I'm not sure. Mr. Koehler might be able to give you his estimate. He'd be more accurate than mine.

ACTING CHAIRPERSON RIORDAN: Dr. Sperling.

BOARD MEMBER SPERLING: I mean, let me just offer a couple of comments to help, you know, structure our thinking about this very complicated question.

And that is that, you know, what we're dealing with here is uncertainty -- a lot of uncertainty in trying to adopt a policy. Now, there's lots of uncertainty around us. You know, climate change, there's a lot of uncertainty with that as well.

And so the challenge here is how do you handle some activities in which there's a certain amount of uncertainty and yet still adopt the policy? And as Professor O'Hare said, you know, and some speakers, if you would ignore the land use effects, then you're ignoring a part of the life cycle analysis. And so that's troublesome to do that.

On the other hand, there is a lot of uncertainty as, you know, both speakers and everyone else here understands and acknowledges.

So the challenge we have is how to deal with this uncertainty. And part, of course, is having a review process that, you know, staff did build into it so science is reviewed over time.

And, you know, I note that scientists -- Dr. Kaffka is a good example of an outstanding scientist. He likes to see precision and accuracy before policy actually

takes place. And most of us would agree with that.

On the other hand, you know, if we don't handle -- deal with this land use effect, you know, we are essentially assigning a value of zero to it. We do know it has an effect. The question is how large that effect is, as Dr. Kaffka said and others have said here.

And so, you know, part of this is an assessment of, you know, how we handle it. And there is no right answer. You know, over time we'll understand it better. Ideally, we'll have different methods to use that are increasingly robust and accurate.

But it's just hard for me to -- you know, listening carefully and trying to keep an open mind, it's hard to imagine how we don't proceed with something like what the staff proposed.

You know, if anyone comes up with a better idea on how to actually handle these land use effects and not ignore them in a way that, you know, is fairly robust, you know, however -- whatever philosophy, you want to be conservative or whatever, I think we'd be very open to hear it. But we just haven't heard that. You know, no one has come forward with that.

And so, you know, the argument from the corn ethanol people that, you know, we're picking upon poor corn ethanol, you know, is really disingenuous, because

there's been a tremendous amount of analysis done, and there's been a lot of care done looking at these market -- looking at the market mediated affects also saying we don't want to pick on just corn ethanol or just biofuels.

And there are these market mediated effects. But no one has been able to identify any large market mediated effect other than with the biofuels that -- in terms of having a large carbon effect.

I think the staff has done a fabulous job. They're really to be complimented. This has been very complicated. This is really -- I mean, this has been tremendously creative as well in designing this instrument, because no one has done this before. No one has used life cycle concepts, you know, before. And yet this is going to be used by, you know, many, many policies in the future. You know, we're kind of the guinea pigs, and we need to try to get this as right as we can.

But this is the beginning of a real transformation of policy and how policy handles a lot of these questions.

And the other part of it is also agriculture. You know, biofuels is getting picked on and corn ethanol is getting pick on. You know, you can feel that way. If you are the corn ethanol person, you'd feel that way and I would understand that it.

But, in fact, all these land use effects we're going to be looking at it in terms of all the agricultural, the whole agricultural industry and land -- all the uses of land.

So this is kind of a -- this is a new world we're entering into. And it's kind of scary for some people. And some people are going to be more threatened by it and legitimately so.

But I think the staff has done a good job of sticking with the science as best as they can, as best as is understood. And certainly, it's not correct because there's a lot of uncertainty.

So that's just trying to kind of phrase -- you know, to frame this whole very difficult process we're going into.

ACTING CHAIRPERSON RIORDAN: Thank you, Dr. Sperling.

Ms. D'Adamo.

BOARD MEMBER D'ADAMO: Question for Dr. Sperling. I tried to come here with an open mind. I've been reading the clips and don't have an opinion. So this was really useful to hear from the professors and also from the public.

But I like the suggestion that you make. If you have a better suggestion, come forth.

But let's just say, for example, that the ethanol industry were to come forth with some recommendations as to how the model could be tweaked to incorporate additional factors.

So question for you and for staff. Would there be an enough time to make adjustments in light of the fact that we have the hearing coming up in one month? I just don't understand enough about -- I know this is complex, but is it so complex that -- yeah. I see your head shaking yeah. That we couldn't run additional factors into the model to make some adjustments?

I like the idea of suggesting that the industry come forth with suggestions as opposed to saying don't do it. Because I agree with you. If we don't incorporate these effects, we're basically assigning a value of zero.

DEPUTY EXECUTIVE OFFICER SCHEIBLE: Some adjustments can be done in a relatively short time. You can't reassess and redo the whole concept.

I'd like to say that in the -- I guess it's been two years now that we've been working on this. And in the year that we've been working intensely on trying to evaluate the land use change effects, we have heard many recommendations. And many of them have been used, and some of them are reflected in the recommendations we're making. Others have been assessed so we understand them

and we would decide what to do with them. So that process has gone on.

And what you're seeing now is a year ago the model was run, and it came out with an estimate that's several times higher than the one we think is a good one to use. And that is the result of looking at some of these factors and saying how do you use the tool better? How do you use better information? And quite frankly what we're going to do over the next couple of years is do that for these biofuels.

And then secondly, what I want to do is set up a policy that says let's figure out ways to make biofuels and raw materials that biofuels are made of that have no or little land use effect. Therefore, if we're wrong by a hundred percent, we're changing a little number. And the trouble we have now is that the numbers are very large relative to the emission benefits of the fuels.

So I think that the signal we're trying to put out with the low-carbon fuel standard is that there are many ways to make fuels out there that are truly low carbon that will be sustainable. Let's set up the framework and the mechanisms to do that. And then we'll work to get the numbers right for the individual fuels.

We have it identified for most of the new generation biofuels what the number will be. We know some

can be made with zero and some can be made with very low. And that's what we wanted to work on.

ACTING CHAIRPERSON RIORDAN: Dr. Balmes, then Dr. Telles.

BOARD MEMBER BALMES: Do you want to follow up right now?

ACTING CHAIRPERSON RIORDAN: No. You're going to say --

BOARD MEMBER TELLES: No. It has to do with this whole land use issue and is a very basic question.

Have any other jurisdictions or nations come up with a land use number that they've actually used for policy? In other words, is this the first organization that's coming up with any number? So we really do need to get it pretty close to correct as possible?

BOARD MEMBER SPERLING: It's not entirely correct that no one else has used -- no one else has come up with a specific number. But, you know, the federal legislation, it said that you have to take into account the land use effects and then with the land use effects, you know, the corn ethanol, the advanced biofuels have to be a certain amount better.

In the European Union, it did say that waste biofuels would count as having a zero number for land use effect, which is correct, and said that the other biofuels

had to be so much better than gasoline. So there's been a lot of -- you know, we're taking it a step further and --

DEPUTY EXECUTIVE OFFICER SCHEIBLE: And the EU has reversed policies on certain biofuels after seeing effects that have occurred. Some have been indirect, but some have been simply direct. There's a major problem with forest resources being used in Asia to create biofuel stocks.

ACTING CHAIRPERSON RIORDAN: Now I'm going to one more -- I forgot the court reporter. And I am very sorry. I am so sorry. I will now have to make this up to you somehow.

So what I'm going to do is Dr. Balmes, last question. Then we've got to move on to this one individual who has signed up to speak under public comment.

And Mr. Cleveland, let me tell you directly, I'm going to give you minutes, and then we've got to conclude our meeting.

So Dr. Balmes.

BOARD MEMBER BALMES: So I just wanted to move on to a brief comment about another area of uncertainty.

We've been talking about uncertainty in land use -- indirect land use effects. But I think there's a little bit of uncertainty -- maybe a lot about public

health aspects of this. And this is an example of why I think we need to have public health evaluations for each of our AB 32 regs.

There may not be big time problems, but I don't think we know the toxicity of emissions from alternate fuels that could be considered -- I mean, we don't even know the toxicity of biodiesel emissions, for example.

So there has to be -- I don't want to slow movement with regard to the low-carbon fuel standard, but I think we have to be concerned about those potential affects. We have to be concerned, as one of the witnesses testified, about local impacts putting big biomass fuel facilities in the Central Valley. What's it going to mean to the communities that are around those facilities?

So I just think we have to have a process in place to evaluate things as we go along. Again, not to slow things up, but to keep evaluating as we go along.

ACTING CHAIRPERSON RIORDAN: All right. Thank you.

I really do think we need to move on.

So take a break, Mr. Court Reporter, for just one minute.

Mr. Cleveland, where are you?

Please come down.

MR. CLEVELAND: Thank you for taking the time to

take my questions. And I found everything here very informative.

I represent a trucking company out of Fresno and also some farmers in the Fresno area. So everything that you're saying about biomass is very informative, especially in the context of this market.

President Obama's been speaking of I think of the powerplants will probably be biomass powerplants. So everything that you guys are talking about today, you know, about the carbon aspect of things is really informative.

So just a couple of points of clarification for the people that I'm asking the questions on behalf of.

When we're talking about the refrigerated trailers that use the diesel, there's -- in this regulatory advisory that was sent out in August of last year, there was a point on here about permanently fixing a label on the fuel tank that's going to be using biodiesel.

The question is, can there be a second tank put on the trailer, one that uses regular petroleum diesel and the other that uses biofuel with a switch that, one, can use where they're in the state of California to use only biofuels and then when they exit the state of California to switch back to using regular petroleum fuel.

So that was a question I think that was supposed

to be targeted to Mr. Rodney Hill. Go ahead.

ACTING CHAIRPERSON RIORDAN: Mr. Cleveland, is that your question for --

MR. CLEVELAND: Yeah. I had a couple other ones, but I do want to keep it brief.

ACTING CHAIRPERSON RIORDAN: All right. Let's hear the others.

MR. CLEVELAND: The other one was the regulation for above-ground fuel tanks for the biofuels, are those tanks supposed to be above ground? Can they be below ground fuel tanks as well, because there's a gentleman that owns a fuel station in Fresno.

Also, does the unit need to run on B-100 while it's only in docking stations or in the truck stop? Or can it burn regular diesel as it's driving down the road in the state of California? Does it have to burn B-100 one-hundred percent of the time?

And I think that's about it. One company is concerned about lawsuits from the trucking company associations.

ACTING CHAIRPERSON RIORDAN: Okay. Mr. Cleveland, you've probably asked some good questions that I don't have an answer for, but there's a lot of staff down there that can help you and I think meet with you directly.

And what I would do, Mr. Scheible, I'm going to look at you or Mr. Goldstene.

Mr. Cleveland, if you have a few minutes and can remain after the meeting, I'm going to ask them to indicate who should meet with you, and we'll just get your questions answered.

EMISSIONS ASSESSMENT BRANCH CHIEF DONOHOUE: This is Dan Donohoue. We have the person down here right now to meet with him.

ACTING CHAIRPERSON RIORDAN: Great. Now that is efficiency. Thank you.

Staff, I want to thank all of you who have participated today, whether you've been listening as the Board has been listening or whether you have been presenting, as those of you who have presented.

This has been a very interesting day. We've gained I think a lot of information. Some of my colleagues I'm sure have many more questions, which will be asked between now and our next hearing or at our next hearing. But I want to thank you for the real interest in a very complex issue. So we will stand adjourned unless I hear any opposition to that. And look forward to seeing you in April. Thank you very much.

(Thereupon the California Air Resources Board recessed at 2:27 p.m.

CERTIFICATE OF REPORTER

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing California Air Resources Board meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 1st day of April, 2009.

JAMES F. PETERS, CSR, RPR
Certified Shorthand Reporter
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